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PRINCIPAL INVESTIGATOR: Dr. William Killgore

CONTRACTING ORGANIZATION: The McLean Hospital Corporation
Belmont, MA 02478

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Dr. William Killgore

E-Mail: killgore@mclean.harvard.edu

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14. ABSTRACT

Data collection is currently underway and preliminary findings from the first subjects to complete the study are encouraging. Overall, our preliminary data on cognition, emotion, subjective and objective sleep quality suggest that six weeks of morning Bright Blue Light therapy versus comparable Amber Light Placebo are supporting our initial hypotheses. Furthermore, initial comparisons using functional magnetic resonance imaging tasks also suggest that the Bright Blue Light condition was effective in altering brain responses during demanding attention and concentration tasks, whereas such changes were not evident in the Amber Light Placebo condition. While data are too limited to draw conclusions, these initial findings point toward some beneficial effects of the active treatment in reducing daytime sleepiness and sleep-related functional impairments, improving objective sleep quantity, and showing clinically significant improvements in several neuropsychological domains, as well as affecting functional brain responses.

15. SUBJECT TERMS
Bright Light, Mild Traumatic Brain Injury, functional Magnetic Resonance Imaging (fMRI) Diffusion Tensor Imaging (DTI)

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INTRODUCTION:

Given the large number of military personnel returning from combat operations in Iraq or Afghanistan with reported or suspected head injuries (Hoge et al., 2008), the outcome of the present study could have significant impact on the delivery of health care to returning military veterans. Other than cognitive-behavioral therapies and avoidance of re-injury, there are few alternative treatments for patients suffering from post-concussive symptoms secondary to a mild traumatic brain injury (mTBI). Alternative approaches to treatment, or adjunctive approaches that can be used to augment ongoing treatments, are clearly needed. Because sleep disruption is one of the primary complaints of individuals following mTBI, and sleep is critical to neurogenesis and neural plasticity, sleep enhancement seems to be an ideal candidate for direct intervention. If the sleep problems can be improved, it is more likely that other aspects of recovery will be accelerated. With sleep improvement, we expect that emotional difficulties will be reduced, ongoing adjunctive treatments will be enhanced, and brain functioning can be restored to the fullest extent possible. Furthermore, non-pharmacologic interventions are generally preferable and more cost effective than reliance upon prescription medications for sleep problems. Therefore, it is hypothesized that by using light therapy to entrain the circadian sleep-wake cycle, we may improve sleep in a sample of individuals with a recent history of concussion, and thereby increase the likelihood that they will recover more quickly, benefit more extensively from other forms of therapy, and build emotional and cognitive resilience. If effective, the proposed approach could be used in isolation or as an adjunct to ongoing therapy to reduce the impact of mTBI and post-concussive symptoms, thereby facilitating a more rapid recovery. Even if the proposed light therapy fails to prove effective at improving sleep or symptom profiles, the obtained cognitive and neuroimaging data, neurocognitive testing, and actigraphy data will prove invaluable in developing further insights into the relationship between mTBI, sleep, and brain function.

BODY:

Accomplishments According to Statement of Work (SOW)

The study is progressing as planned. Consistent with the Statement of Work for YEAR 1 the following tasks have been accomplished:

SOW 1. The PI will submit final protocol for human subjects use approval through the local IRB of McLean Hospital.

Accomplishments:

- The research protocol was written and submitted to the McLean Hospital IRB on 1 JUL 2010. After one revision, this proposal was approved by the local IRB on 25 AUG 2010. The protocol was then submitted to the USAMRMC for Human Use approval on 10 SEP 2010. After submission to the USAMRMC, further revision was required. Changes were submitted to both the USAMRMC and McLean IRB. The McLean Hospital IRB and the USAMRMC approved the study protocol for the use of human subjects as of 9 MAR 2011.

SOW 2. The PI will purchase or acquire the assessment tests and instruments (i.e., Checklists; PHQ, ANAM4, PAI, STAI, Morningness-Eveningness Scale).

Accomplishments:

- Study materials were procured or developed, including:

a. **Commercially Available Tests:** The following commercially available tests were purchased and received: Neurobehavioral Symptom Inventory; Mini International Neuropsychiatric Interview (MINI); PAI Personality Software System and PAI Professional Manual; Automated Neuropsychological Assessment Metrics TBI Battery.
b. **Self-Report/Paper-and-Pencil Tests/Scales**: The following instruments were obtained or developed: Barratt Impulsivity Scale-11, Connor-Davidson Resilience Scale, Invincibility Belief Index, Evaluation of Risks Scale, Morningness-Eveningness Questionnaire, Screen Time Questionnaire, Day of Scan Information Questionnaire, Functional Outcome of Sleep Questionnaire, Patient Health Questionnaire, Pittsburgh Sleep Quality Index, Rivermead Post-Concussion Symptoms Questionnaire, Beck Depression Inventory, Spielberger State-Trait Anxiety Inventory.
c. **Standard Operating Procedures (SOPs)**: Comprehensive SOPs outlining administration procedures for all study-related tasks and administration procedures were developed, printed, and mounted into study binders for use during data collection.

SOW 3. The PI will acquire, develop, and/or program the computerized stimulation paradigms for use during functional neuroimaging (i.e., MSIT).

Accomplishments:

- The following computer tasks were programmed: Psychomotor Vigilance Test, Go/No Go; Tower of London; Balloon Analogue Risk Task; Multi-Source Interference Task; N-BACK; and Body Sway and Stability Test.
- Programming of all computerized functional MRI stimulation paradigms and assessment tasks using E-prime software was completed. Computer stimulation paradigms were tested in the scanner environment to ensure that they could be presented and seen by subjects in the scanner. MRI scan slots were reserved for the remainder of the year.
- The MRI scan protocol was programmed into the 3T Siemens scanner. Two development pilot scans were conducted successfully to ensure that all tasks were operational and that data could be successfully collected during the study.

SOW 4. The PI will acquire necessary equipment, including goLITE devices and actigraphs.

Accomplishments:

- Nine actigraphs were purchased from Philips Respironics Electronics. Four (4) Amber (placebo) and eight (8) blue (treatment) goLITE devices (12 devices in total) were acquired from Philips Respironics Electronics.

SOW 5. The PI will hire and train one half-time research assistant (RA) and one post-doctoral fellow to administer all tasks and carry out study specific procedures.

Accomplishments:

- Two RAs were hired to work part-time on the present study and part time on other studies in the lab. The new RAs began employment on 20 JUN 2011 and one post-doctoral fellow began employment on 24 AUG 2011. These 3 new employees underwent hospital orientation and safety training as required by hospital policies. Extensive training on laboratory procedures, CPR training, ethics and HIPAA training, materials purchasing, regulatory requirements, subject screening, psychiatric interviewing, database creation, MRI data acquisition, data processing, and data analysis was accomplished.
- The two new RAs were trained by a licensed psychiatrist on the administration and scoring of the MINI. The RAs and post-doctoral fellow were trained by a sleep technician in applying electrodes for polysomnography. All three RAs and the post-doctoral fellow were trained by a sleep technician on administering the Modified Sleep Latency Test (MSLT). The RAs also underwent intensive training on administration and scoring of all other assessments and computerized tasks used in the study.

SOW 6. PI will develop advertisements and fliers for recruitment.

Accomplishments:

- Internet and flier advertisements were approved for use by the McLean IRB on 25 AUG 2010.

SOW 7. Advertisement and recruitment of participants will begin by the second quarter of Year 1.

Accomplishments:

- **Quarter #3:** Advertisements were posted on Craigslist, as fliers, and in the Metro newspaper, and active subject recruitment was initiated.
- **Quarter #4:** Advertisements continued to be posted as needed to keep enrollment rates steady. We have screened 23 potential subjects, four of whom we have scheduled and brought in for testing, and two subjects who are scheduled to come in for testing in the near future.

SOW 8. Initial data will be preprocessed and inspected for quality control.

Accomplishments:

- Preliminary functional neuroimaging data for both completed subjects have been preprocessed in SPM8. Data have been corrected for motion, realigned, normalized, and spatially smoothed. All imaging data have inspected for artifacts using the Artifact Detection Program (ART) and covariate regressor files have been created for scans showing excess variability in global signal intensity and motion. Self-report data have been scored, checked, and entered into statistical databases. Neuropsychological assessment data have been downloaded and entered into statistical databases. All data have been visually and graphically inspected to ensure that they were entered correctly.

SOW 9. Data collection will commence and approximately 26% of the subjects will be run by year-end.

Accomplishments:

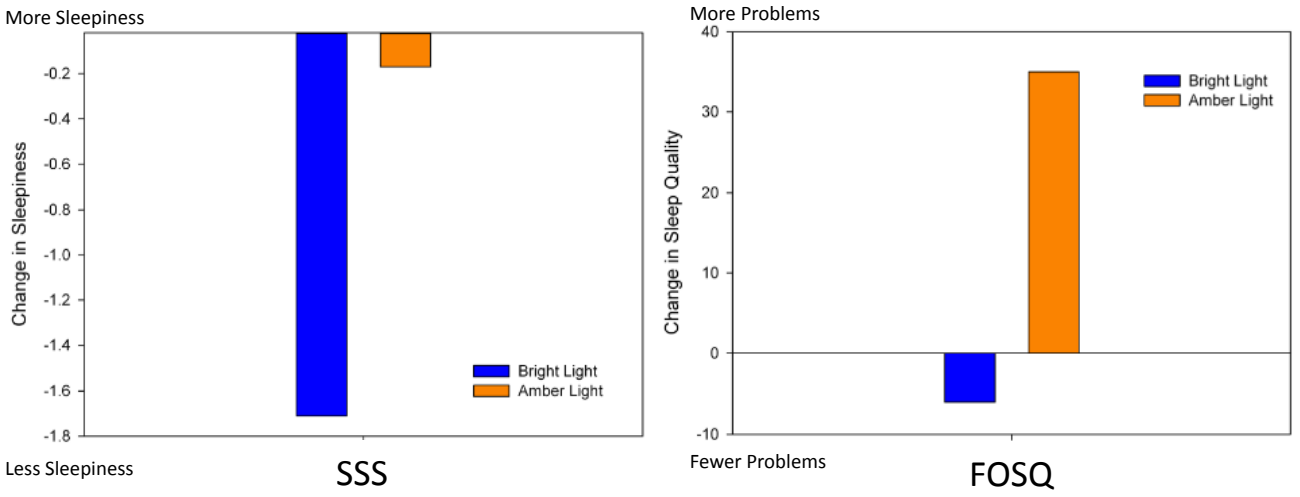
- Data collection began during Quarter 4. The first subject completed the first study session on 10 OCT 2011. By the end of Quarter 4, two subjects were enrolled and completed the study, and two subjects are currently enrolled and in the process of completing data collection.

Preliminary Research Findings

While the current sample size is still too small to make valid conclusions that can be generalized to the larger populations, we report preliminary findings to demonstrate feasibility of the study and to show initial data trends. Complete data have now been collected from 2 participants, one who received the active Bright Blue Light Treatment and the other that received the Amber Placebo Treatment. Overall, the 6-week bright light intervention yielded clinically significant improvements in sleep, cognition and emotion relative to the 6-week amber light placebo intervention (see Figures 1 to 7).

Subjective Sleepiness and Functional Outcomes of Sleep: Six weeks of morning bright blue light therapy improved subjective sleep (see Figure 1). The average of seven Stanford Sleepiness Scale (SSS) ratings taken throughout each testing day showed an average decline of 1.70 (SD 0.95) between pre- and post-treatment assessments which was statistically significant (t = -4.42, p < .01). In contrast, following 6 weeks of morning Amber Light Placebo therapy, there was no change in daytime sleepiness on the SSS. Self-ratings on the Functional Outcome of Sleep Questionnaire (FOSQ) were also evaluated. Here higher scores indicate greater functional impairment due to sleep problems. Preliminary findings suggest that quality of life was less impaired by poor sleep quality relative to the pre-therapy assessment for the Bright Blue Light Treatment subject, but not for the Amber Placebo participant (who showed a worsening in quality of functional outcomes). Overall, our preliminary findings are encouraging and suggest that a 6-week morning bright light therapy may improve subjective sleep quality. Continued data collection will be necessary to establish the reliability of this effect.

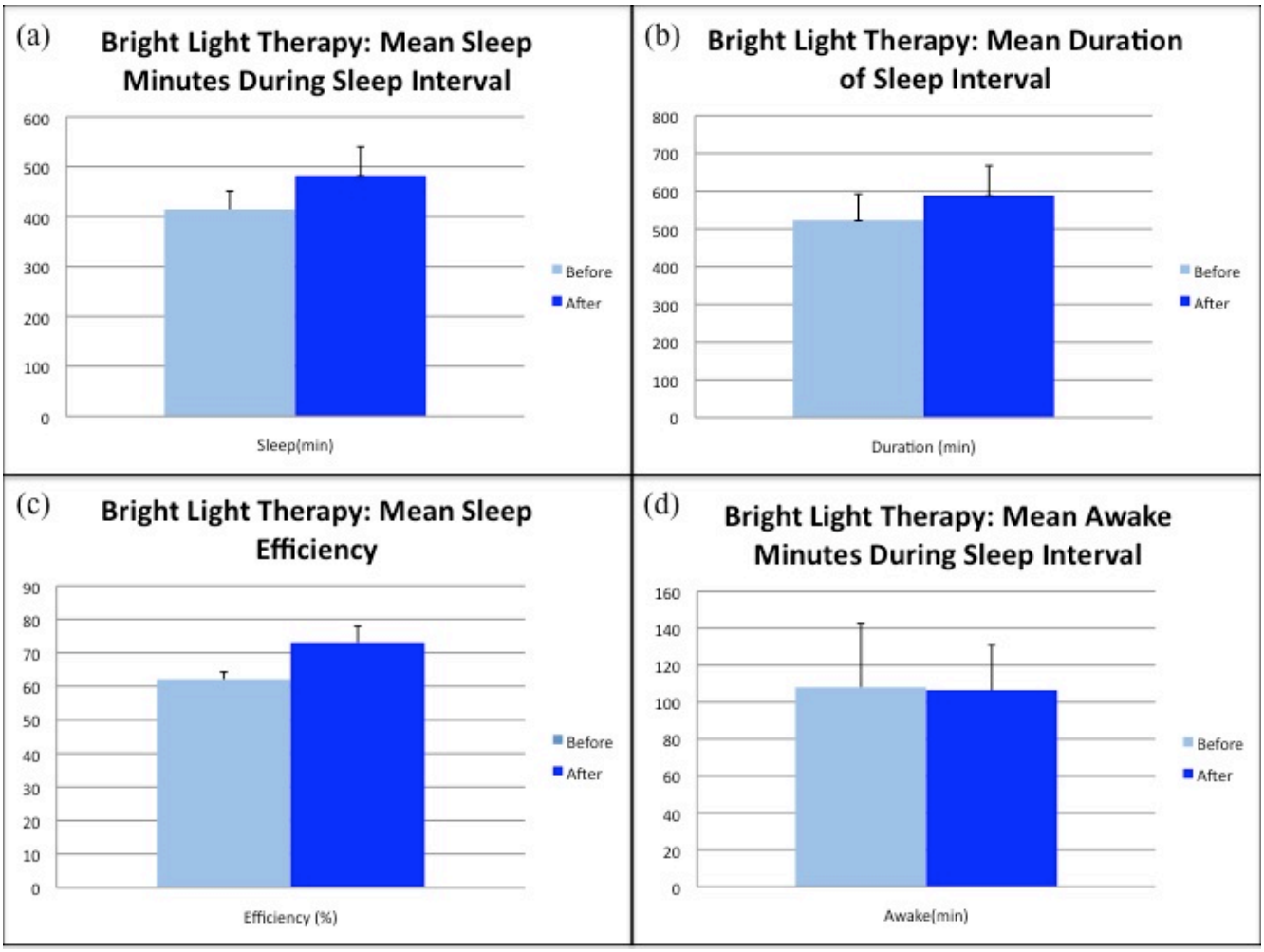
Figure 1: Subjective sleepiness (a) and functional problems associated with sleepiness (b) following morning bright light therapy and amber light placebo



Actigraphic Sleep Measurement: The improvement in subjective sleepiness and sleep quality following morning bright light therapy was also accompanied by improvements in several indices of the actigraphy data that were collected as an objective measure of sleep. Data were analyzed using the Actiware 5.0 program with a medium sensitivity threshold for movement. Automated rest period settings were adjusted via data from daily sleep diaries to provide a better approximation of rest

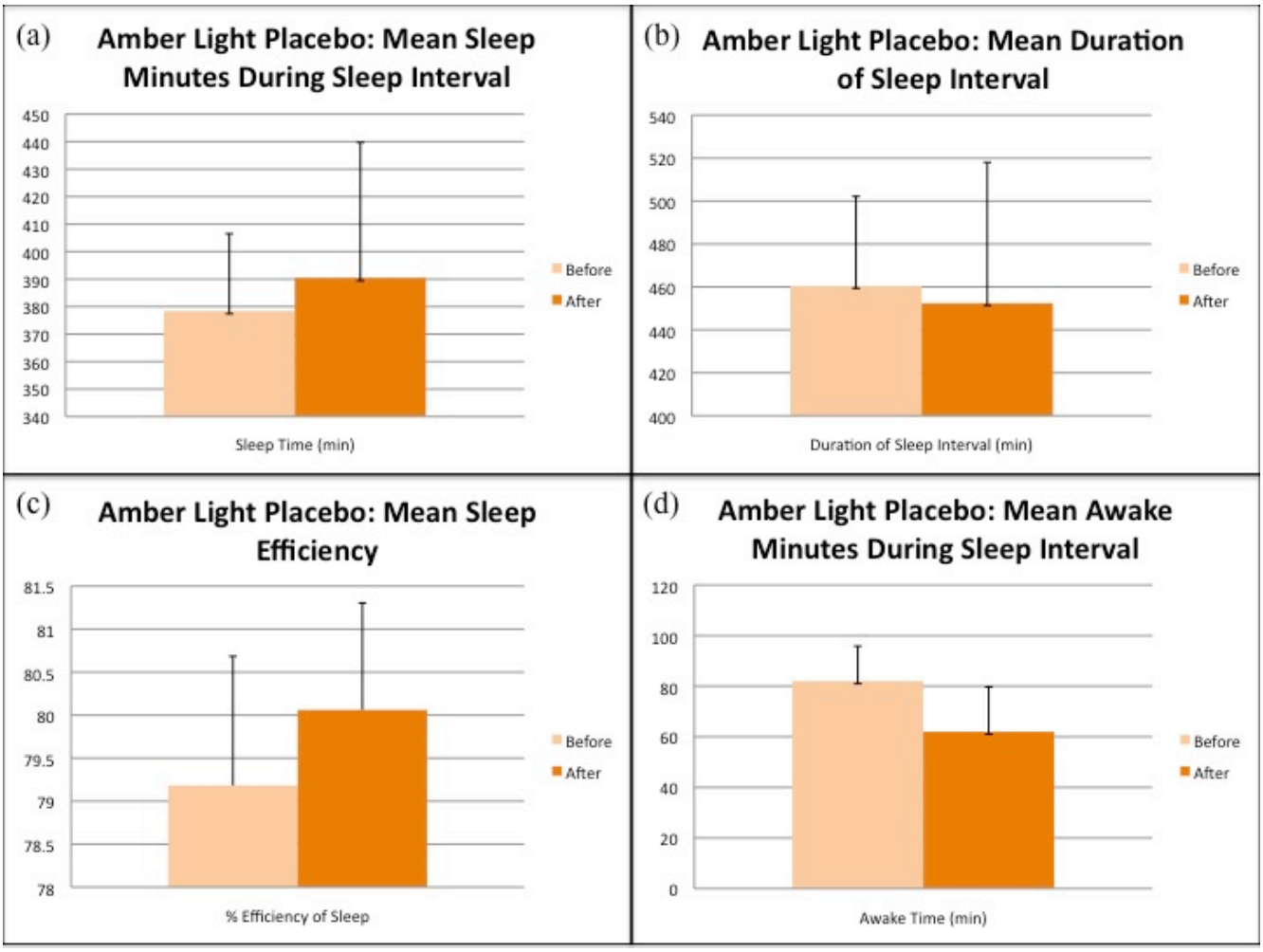
intervals throughout the study. For the present report, data were averaged from the baseline week (i.e., prior to initiation of treatment) and from the final week (i.e., week 6) of the treatment period. Pertinent results are depicted in Figure 2 (Bright Blue Light intervention) and Figure 3 (Amber Light Placebo). As evident in the figures, following six weeks of morning Bright Blue Light Therapy, the mean total minutes of sleep obtained during the sleep intervals (i.e., time in bed) increased by about an hour following treatment (Figure 2a). The mean duration of the sleep intervals (i.e., time in bed) also increased by approximately an hour following the active blue light treatment (Figure 2b). Overall sleep efficiency (i.e., sleep time/time in bed) (Figure 2c) increased by 11% for the active treatment condition. These improvements were larger than the standard error of measurement indicating clinically significant change. However, the mean awake minutes during sleep intervals remained unchanged (Figure 2d).

Figure 2: The effects of bright light therapy on sleep as measured with actigraphy



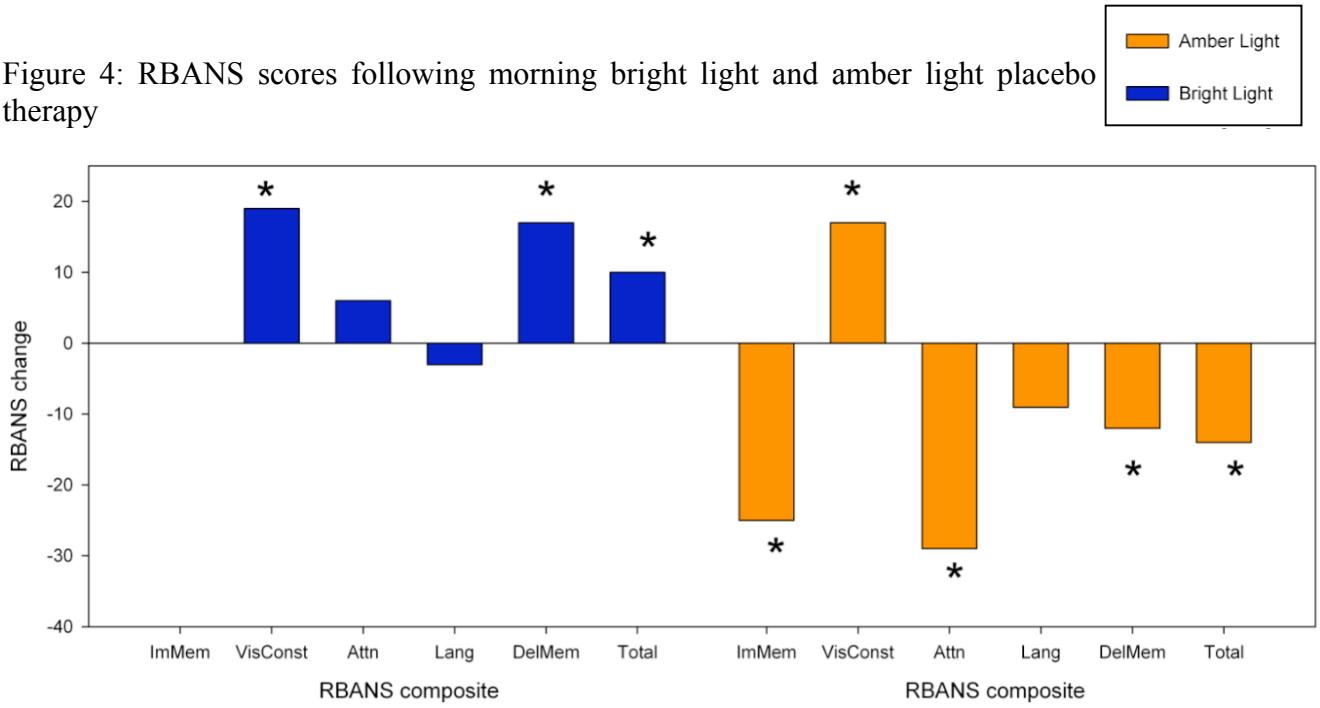
In contrast, following six weeks of morning Amber Light Placebo therapy, the mean duration of sleep during rest intervals (Figure 3a), the mean duration of sleep intervals themselves (Figure 3b) and the mean sleep efficiency (Figure 3c) remained unchanged (i.e., change exhibited was within the standard error of measurement). However, the mean number of minutes awake during sleep intervals (Figure 3d) reduced by approximately 10% indicating clinically significant change for that subject.

Figure 3: The effects of amber light placebo therapy on sleep as measured with actigraphy



Effects on Neuropsychological Performance: Participants completed several batteries of neuropsychological tasks, including the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) and the Traumatic Brain Injury (TBI) module of the Automated Neuropsychological Assessment Metrics (ANAM®) computerized test battery. As evident in Figure 4, for the Bright Blue Light condition, Reliable Change Indices (RCI) indicated clinically significant improvement on three scales of the RBANS (Visuospatial/ Constructional: RCI=2.88; Delayed Memory: RCI=2.77; Total RBANS: RCI=2.77) relative to the assessment prior to the 6-week intervention. None of the assessed cognitive abilities deteriorated. In contrast, RCI indicated clinically significant improvement of only one RBANS scores following the 6-week Amber Light Placebo intervention, while four scores showed clinically significant deterioration (see Figure 4). The criterion of significance was set at ±1.96 which provides significance at $\alpha = .05$. Please note that alternate version of the RBANS were used at the two assessments.

Figure 4: RBANS scores following morning bright light and amber light placebo therapy



Similarly, clinically significant improvement was also demonstrated on subtests of the ANAM® (Figures 5 and 6). Clinically significant change was determined if the change following the intervention was greater than the standard error of measurement (SEM). Following 6 weeks of Bright Blue Light Therapy, mean response times on the ANAM Simple Reaction Time (SRT) were significantly faster relative to before the intervention. On the ANAM Matching to Sample (Match), the proportion of correct response increased, although mean response times also increased. This suggests that an improvement in response accuracy was at the expense of an increase in response speed for this participant. On Mathematical Processing (Math), response accuracy was maintained, while mean response times increased. Thus, simple response times were improved, whereas response times for more complex tasks were not.

Figure 5: ANAM scores (response times in ms) following bright light and amber light placebo therapy

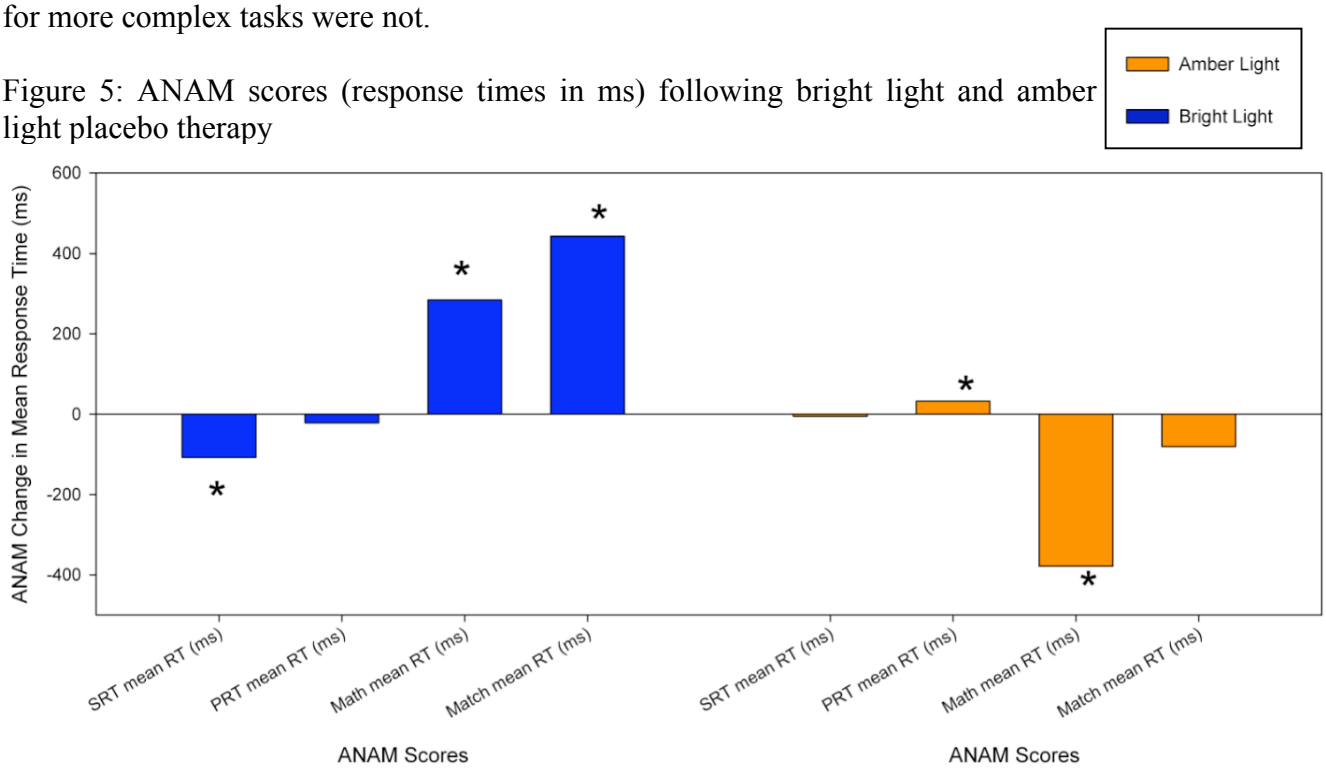
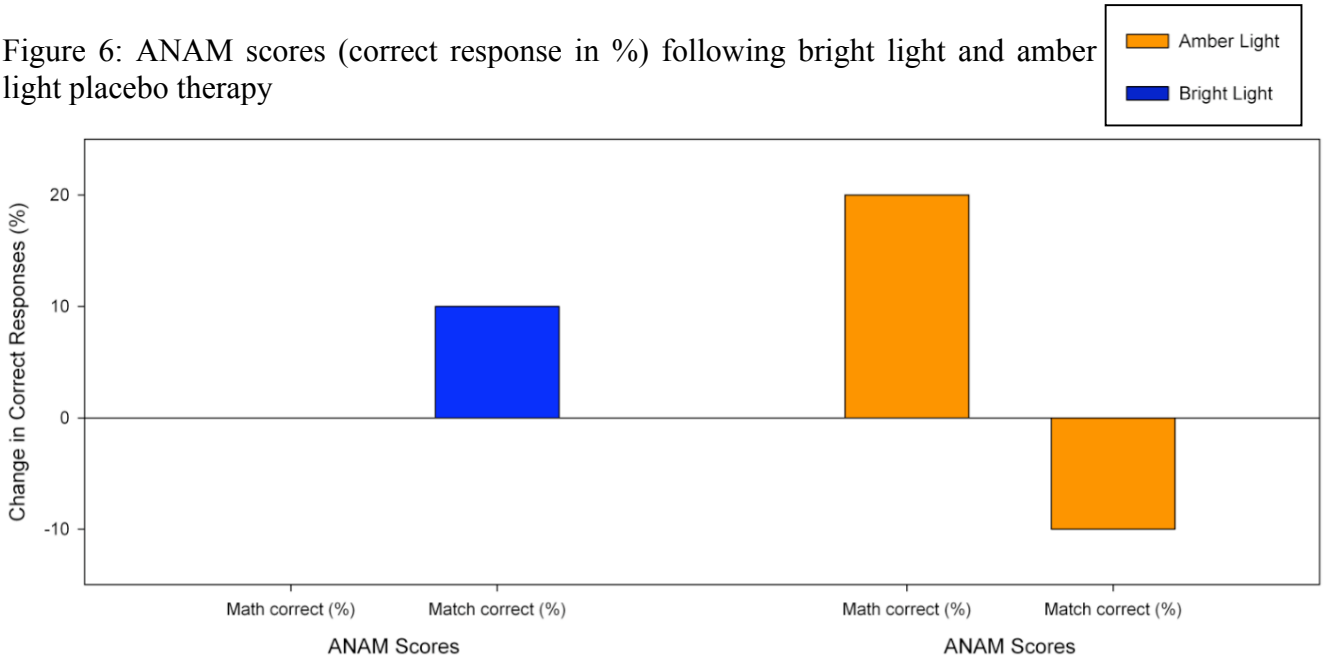
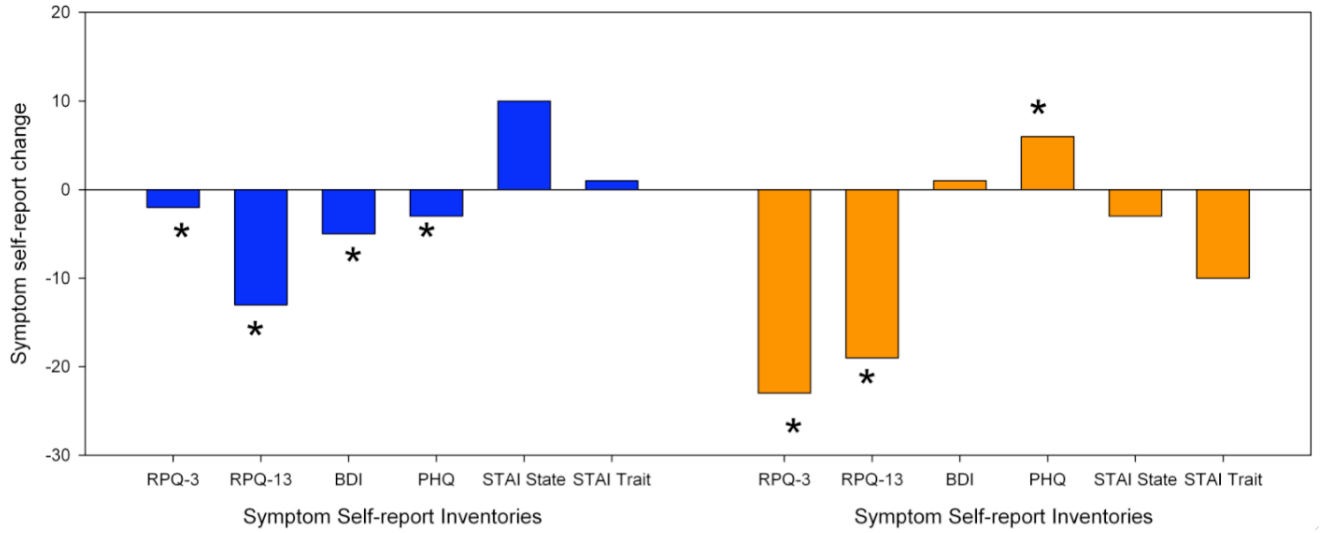


Figure 6: ANAM scores (correct response in %) following bright light and amber light placebo therapy



Self-Reported Post-Concussive Symptoms: Following 6 weeks of morning Bright Blue Light intervention, post-concussion symptoms (measured with the Rivermead Post Concussion Symptoms Questionnaire; RPQ) and depression severity (measured with the Beck Depression Inventory; BDI, and Patient Health Questionnaire; PHQ) reduced by at least 50% relative to the baseline assessment prior to the treatment (Figure 7). State and trait anxiety (measured with the Spielberger State Trait Anxiety Inventory; STAI) increased by less than 25% compared to the pre-intervention assessment. Surprisingly, a similar reduction of more than 50% in post-concussion symptoms (RPQ-3, RPQ-13) was measured following 6 weeks of morning Amber Light Placebo therapy. However, depression severity (PHQ) and trait anxiety (STAI State) remained unchanged, whereas state and trait anxiety (STAI) reduced by less than 25%. Overall, these preliminary results suggest that 6 weeks of morning bright light intervention reduce the symptom burden induced by mild TBI, but further data collection will be needed to assess the full nature and reliability of these effects relative to placebo.

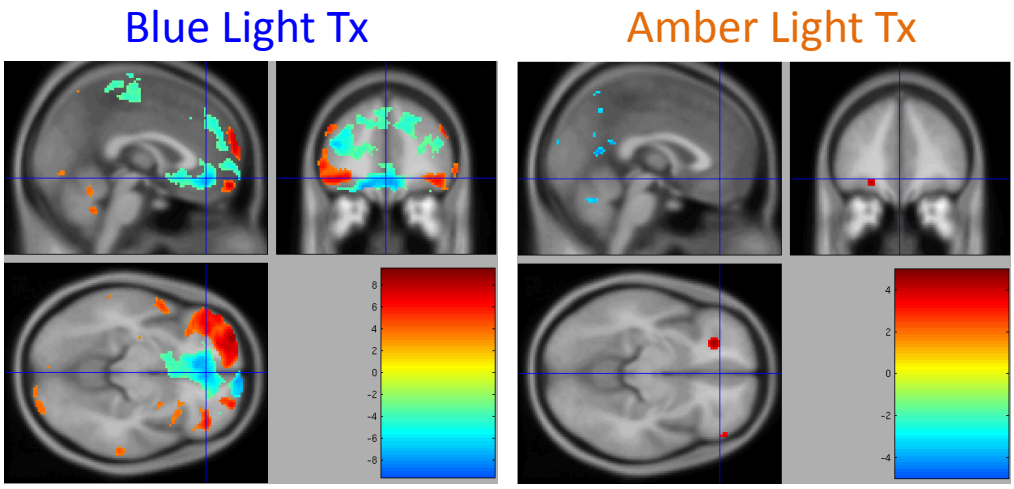
Figure 7: Post-concussion symptom, depression and anxiety following bright light and amber light placebo therapy



Functional Neuroimaging Findings: Participants completed a series of functional and structural neuroimaging scans. Initial data have been preprocessed for both subjects. With the limited number of participants completed, it is not possible to provide group-wise statistical comparisons. However, preliminary findings for each participant are presented here.

Participants completed the Multi-Source Interference Task (MSIT) at baseline before undergoing treatment and again after 6 weeks of treatment with either Bright Blue Light treatment or Amber Placebo light treatment. The task requires the ability to sustain attention and concentration, shift mental set, and deal with conflicting sources of information. Data were analyzed in SPM8. As shown in Figure 7, a contrast between the pre-and post-treatment scans yielded significant increases in activation within the lateral prefrontal cortex for the Bright Blue Light treatment, but not for the Amber Placebo Light treatment. Each contrast was thresholded at $p < .001$ (uncorrected), $k = 5$.

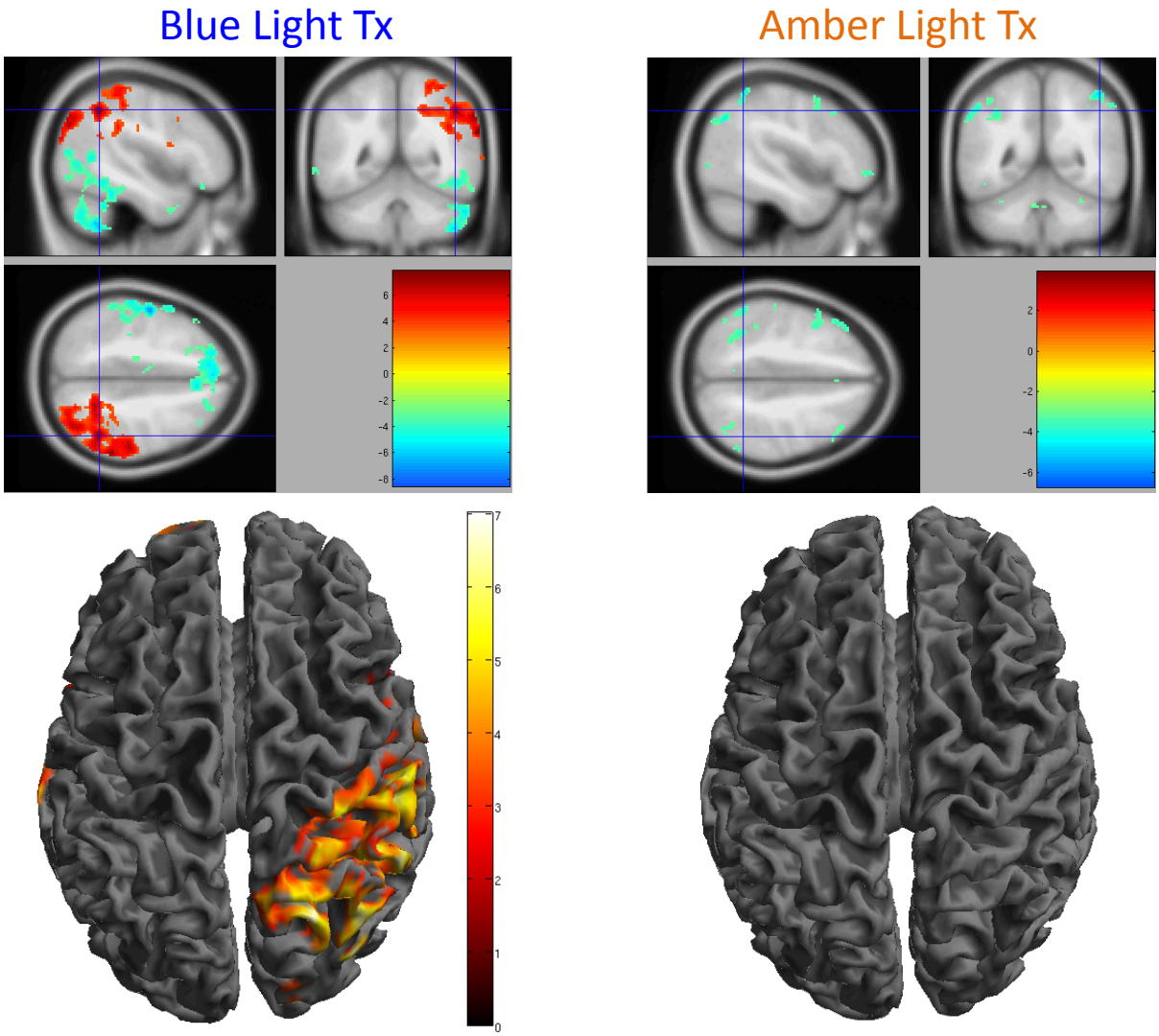
Figure 7: Pre to post treatment changes in brain activation during the MSIT task for each condition



Change in brain activation shown from pre to post treatment on the MSIT Task. Six weeks of blue light treatment was associated with a significant change in prefrontal brain activation, while the amber placebo light was not.

Participants also completed a standard n-back working memory task. This task required them to maintain a letter in working memory and compare it to either the letter shown in the previous trial (1-back) or to the letter shown two trials previously (2-back). The control condition was to press a key each time the target letter X appeared on the screen (0-back). For this analysis, we contrasted activation in the brain from the 2-back versus the 0-back conditions and compared these results from pre-treatment to post-treatment for each condition. As evident in Figure 8, the Bright Blue Light treatment was associated with significant activation in the attention regulating regions of the right parietal cortex, whereas the Amber Placebo Light treatment was not. Each contrast was thresholded at $p < .001$ (uncorrected), $k = 5$.

Figure 8: Pre to post treatment changes in brain activation during the N-Back task for each condition



Change in brain activation shown from pre to post treatment on the N-back Task (specifically 2-back > 0-back contrast). Six weeks of blue light treatment was associated with a significant increase in right parietal lobe functioning and reduce medial prefrontal brain activation, while the amber placebo light was not.

KEY RESEARCH ACCOMPLISHMENTS:

- Protocols and materials for human subject use were written, submitted, and approved by the McLean Hospital IRB and by USAMRMC.
- All assessment instruments were purchased, acquired, or developed.
- Computerized stimulation paradigms were created for use during fMRI scanning.
- Two research assistants and one post-doctoral fellow were hired and trained on all study procedures.
- Advertising and recruitment are ongoing.
- Databases have been constructed and data entry is ongoing.
- 4 participants have been enrolled to date.
- 2 participants have completed scanning/study procedures.
- Preliminary results suggest that morning bright light therapy improves sleep, cognition and emotion relative to a morning amber light placebo therapy of equal duration and intensity.

REPORTABLE OUTCOMES:

- Submitted two grant proposals to CDMRP supported by preliminary findings from this research.

CONCLUSION:

The study is progressing forward, although the initiation of data collection was slowed temporarily due to minor delays in obtaining the placebo devices from the manufacturer. Data collection is currently underway and preliminary findings from the first subjects to complete the study are encouraging. Overall, our preliminary data on cognition, emotion, subjective and objective sleep quality suggest that six weeks of morning Bright Blue Light therapy versus comparable Amber Light Placebo are supporting our initial hypotheses. Furthermore, initial comparisons using functional magnetic resonance imaging tasks also suggest that the Bright Blue Light condition was effective in altering brain responses during demanding attention and concentration tasks, whereas such changes were not evident in the Amber Light Placebo condition. While data are too limited to draw conclusions, these initial findings point toward some beneficial effects of the active treatment in reducing daytime sleepiness and sleep-related functional impairments, improving objective sleep quantity, and showing clinically significant improvements in several neuropsychological domains, as well as affecting functional brain responses. We fully appreciate that these are preliminary results and that valid and reliable findings will require additional data collection. However, given the overall trend in the data pointing towards the beneficial effect of morning Bright Light therapy on sleep, cognition and emotion, we are encouraged and believe that this study has a high likelihood of yielding important findings.

REFERENCES:

Hoge, C. W., McGurk, D., Thomas, J. L., Cox, A. L., Engel, C. C., & Castro, C. A. (2008). Mild traumatic brain injury in U.S. Soldiers returning from Iraq. *New England Journal of Medicine, 358*(5), 453-463.

APPENDICES:

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Appendix: Study Measures/Assessments

Day 1 (Assessment Day)

1. Neurobehavioral Symptom Inventory (NSI)
2. Personality Assessment Inventory (PAI)
3. Screen Time Questionnaire (STQ)
4. MINI International Neuropsychiatric Interview (MINI)

Days 2 & 3 (Scan Days)

Pre-scan

5. Multi-Source Interference Task Practice
6. N-back practice
7. Stanford Sleepiness Scale (SSS)

Scan

8. Multi-Source Interference Task
9. N-back
10. Diffusion Tensor MRI
11. Resting State MRI

Post-scan

12. Repeatable Battery for the Assessment of Neuropsychological Status
13. Automated Neuropsychological Assessment Metrics (ANAM4) TBI Battery
14. Psychomotor Vigilance Test (PVT)
15. Multiple Sleep Latency Test (MSLT)
16. Invincibility Belief Index (IBI)
17. Go/No Go
18. Body Sway and Stability (BS&S)
19. Day of Scan Information Questionnaire
20. Morningness-Eveningness Questionnaire (MEQ)
21. Functional Outcome of Sleep Questionnaire (FOSQ)
22. Evaluation of Risk (EVAR)

23. Patient Health Questionnaire (PHQ)
24. Pittsburgh Sleep Quality Index (PSQI)
25. Rivermead Post-Concussion Symptoms Questionnaire (RPCSQ)
26. Beck Depression Inventory (BDI)
27. Balloon Analogue Risk Task (BART)
28. Spielberger State-Trait Anxiety Inventory – STATE
29. Spielberger State-Trait Anxiety Inventory – TRAIT
30. Tower of London (ToL)

6-Week Intervention Period

1. Sleep Diary

BDI

SUBJECT ID#:_____ DATE: _____/_____/_____

INSTRUCTIONS: On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling in the **PAST WEEK, INCLUDING TODAY!** Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle each one. **Be sure to read all the statements in each group before making your choice.**

1.	0	I do not feel sad.
	1	I feel sad.
	2	I am sad all the time and I can't snap out of it.
	3	I am so sad or unhappy that I can't stand it.
2.	0	I am not particularly discouraged about the future.
	1	I feel discouraged about the future.
	2	I feel I have nothing to look forward to.
	3	I feel that the future is hopeless and that things cannot improve.
3.	0	I do not feel like a failure.
	1	I feel I have failed more than the average person.
	2	As I look back on my life, all I can see is a lot of failures.
	3	I feel I am a complete failure as a person.
4.	0	I get as much satisfaction out of things as I used to.
	1	I don't enjoy things the way I used to.
	2	I don't get real satisfaction out of anything anymore.
	3	I am dissatisfied or bored with everything.
5.	0	I don't feel particularly guilty.
	1	I feel guilty a good part of the time.
	2	I feel quite guilty most of the time.
	3	I feel guilty all of the time.
6.	0	I don't feel I am being punished.
	1	I feel I may be punished.
	2	I expect to be punished.
	3	I feel I am being punished.
7.	0	I don't feel disappointed in myself.
	1	I am disappointed in myself.
	2	I am disgusted with myself.
	3	I hate myself.
8.	0	I don't feel I am any worse than anybody else.
	1	I am critical of myself for my weaknesses or mistakes.
	2	I blame myself all the time for my faults.
	3	I blame myself for everything bad that happens.
9.	0	I don't have any thoughts of killing myself.
	1	I have thoughts of killing myself, but I would not carry them out.
	2	I would like to kill myself.
	3	I would kill myself if I had the chance.

10. 0 I don't cry any more than usual.
1 I cry more now than I used to.
2 I cry all the time now.
3 I used to be able to cry, but now I can't cry even though I want to.

11 0 I am no more irritated now than I ever am.
1 I get annoyed or irritated more easily than I used to.
2 I feel irritated all the time now.
3 I don't get irritated at all by the things that used to irritate me.

12. 0 I have not lost interest in other people.
1 I am less interested in other people than I used to be.
2 I have lost most of my interest in other people.
3 I have lost all of my interest in other people.

13. 0 I make decisions about as well as ever.
1 I put off making decisions more than I used to.
2 I have greater difficulty in making decisions than before.
3 I can't make any decisions at all anymore.

14. 0 I don't feel I look any worse than I used to.
1 I am worried that I am looking old or unattractive.
2 I feel that there are permanent changes in my appearance that make me look unattractive.
3 I believe that I look ugly.

15. 0 I can work about as well as before.
1 It takes extra effort to get started at doing something.
2 I have to push myself very hard to do anything.
3 I can't do any work at all.

16. 0 I can sleep as well as usual.
1 I don't sleep as well as I used to.
2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
3 I wake up several hours earlier than I used to and cannot get back to sleep.

17. 0 I don't get more tired than usual.
1 I get tired more easily than I used to.
2 I get tired from doing almost anything.
3 I am too tired to do anything.

18. 0 My appetite is no worse than usual.
1 My appetite is not as good as it used to be.
2 My appetite is much worse now.
3 I have no appetite at all anymore.

19. 0 I haven't lost much weight, if any, lately.
1 I have lost more than 5 pounds.
2 I have lost more than 10 pounds.
3 I have lost more than 15 pounds.
I am purposely trying to lose weight by eating less YES ____ NO ____

20. 0 I am no more worried about my health than usual.
1 I am worried about physical problems such as aches and pains, or upset stomach, or constipation.
2 I am very worried about physical problems and it's hard to think of much else.
3 I am so worried about my physical problems that I cannot think about anything else.

21. 0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.

VIII. Preferences

1. Please mark the bubble which best describes your feelings **RIGHT NOW**.

I feel like gambling

not at all ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ very much

I am driving and the light turns yellow. I feel like

stopping ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ accelerating

The lights suddenly go out in an unfamiliar stairwell

I don't move ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ I proceed immediately

I feel like

avoiding everyone ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ taking on the world

I feel like diving from a diving board, which is

very high ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ very low

I like

routine ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ adventure

I seek

the thrill of danger ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ tranquillity

I am in a hurry

I take a dangerous shortcut ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ I take a safe detour

I am open to

negotiation ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ confrontation

I prefer to

direct ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ be supervised

I give priority to

reason ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ action

I like to listen to music

at a loud volume ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ very softly

I am sure of myself

not at all ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ completely

I prefer discussions, which are

animated ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ calm

A hostile situation

weakens me ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ reinforces me

A menacing dog approaches

I confront it ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○ I run away

Faced with a potentially dangerous event

I take my time ○○○○○○○○○○○○○○○○○○○○○○○○○ I instantly react

Seeing a person who is drowning, I first

dive in ○○○○○○○○○○○○○○○○○○○○○○○○○ call for help

I prefer work that is

well planned ○○○○○○○○○○○○○○○○○○○○○○○○○ not planned

I am right

all the time ○○○○○○○○○○○○○○○○○○○○○○○○○ never

I emphasize

precision ○○○○○○○○○○○○○○○○○○○○○○○○○ speed

I like to drive

very fast ○○○○○○○○○○○○○○○○○○○○○○○○○ very slow

I like to listen to music with a tempo that is

very slow ○○○○○○○○○○○○○○○○○○○○○○○○○ very fast

I like to take risks

not at all ○○○○○○○○○○○○○○○○○○○○○○○○○ a lot

THANK YOU FOR COMPLETING THIS SURVEY!

Please provide any additional comments below or on the back of the survey, if needed.

Day of Scan Information Questionnaire

Subject #: _____ Date: _____

DATE OF BIRTH _____/_____/_____
day month year

AGE ..... _____ years
HEIGHT ..... _____ ft/inches
WEIGHT ..... _____ lbs
SEX ..... **Male Female**

RIGHT or LEFT-HANDED? ..... **RIGHT LEFT BOTH/NEITHER**

How far did you go in school?
<9th; 9th; 10th; 11th; HS Grad; 2yr College; College Grad; Some Grad School; Masters, Doctorate

Do you have any problems with reading? NO YES _____

What is your primary language (what do you speak at home most of the time)?

English Spanish Other _____

CAFFEINE USE
Did you have any caffeine containing products today? If so, how much? _____
On average, how many cups of caffeinated coffee do you drink per day? _____
On average, how many cups of caffeinated tea do you drink per day? _____
On average, how many cans of caffeinated soda do you drink per day? _____
On average, how many caffeinated sports drinks do you drink per day? _____(brand)
Do you use any other caffeinated products, such as Vivarin? **YES NO**
If YES, **WHAT**? _____ How much?_____ How often? _____

PHYSICAL INFORMATION

If female, when was the start of your last menstrual period (be as precise as possible)?
Date of period:_____ or about _____days ago.

CONCUSSION INFORMATION

How many "concussions" have you had in your life? _____
Did you lose consciousness or get "knocked out" each time? _____
How long ago was your most recent concussion? _____ Date it happened: _____
Briefly describe the situation that led to your most recent concussion:
_____
_____

Did you "see stars" during your last concussion? **YES NO**
Did you lose consciousness during your last concussion? **YES NO**
(If "YES", for how long were you unconscious: _____)
Did you notice that your sleep became worse following the concussion? **YES NO**
After your concussion, what sleep problems became more noticeable to you? (check all that apply)

_____ I get sleepier during the day
_____ I get drowsier than I used to when trying to concentrate or work
_____ I fall asleep when I should not
_____ It is harder to stay alert during the day
_____ It is harder to fall asleep at night
_____ I fall asleep much later than I used to
_____ I fall asleep much earlier than I used to
_____ I sleep later in the morning than I used to
_____ I wake up much earlier in the morning than I used to
_____ When I do sleep, it is fitful or less restful than it used to be
_____ I wake up off and on throughout the night more than I used to
_____ I have more nightmares than I used to

In the months **BEFORE** your concussion occurred:

Before your concussion, at what time did you normally go to bed at night on:
Week nights (Sun-Thur)? _____ AM PM (midnight = 12 AM; noon = 12 PM)
weekends (Fri-Sat)? _____ AM PM

Before your concussion, what time did you typically awaken on:
weekdays (Mon-Fri)? _____ AM PM
weekends (Sat-Sun)? _____ AM PM

Before your concussion, how long did it typically take you to fall asleep at night?
on week nights (Sun-Thur)? _____ MIN HRS
on weekends (Fri-Sat)? _____ MIN HRS

CURRENT SLEEP HABITS

How much sleep did you get last night? _____

Since your concussion, how much do you typically sleep on weeknights (Sun-Thur)? _____

Since your concussion, how much do you typically sleep on weekend nights (Fri-Sat)?_____

Since your concussion, at what time do you normally go to bed at night on:
week nights (Sun-Thur)? _____ AM PM (midnight = 12 AM; noon = 12 PM)
weekends (Fri-Sat)? _____ AM PM

Since your concussion, what time do you typically awaken on:
weekdays (Mon-Fri)? _____ AM PM
weekends (Sat-Sun)? _____ AM PM

Since your concussion, how long does it typically take you to fall asleep at night?
on week nights (Sun-Thur)? _____ MIN HRS
on weekends (Fri-Sat)? _____ MIN HRS

Since your concussion, at what time of day do you feel sleepiest? _____ AM PM
At what time of day do you feel most alert? _____ AM PM

Since your concussion, how many hours do you need to sleep to feel your best? _____

"Since your concussion…"
"If I get less than _____ hours of sleep, I notice an impairment in my ability to function at work."
"If I get more than _____ hours of sleep, I notice an impairment in my ability to function at work."

Is daytime sleepiness currently a problem for you? .....**YES NO**

Are you currently doing shift work, that is, working early morning, evening, or night shifts?...YES NO

Do you ever have trouble falling asleep? .....YES NO
If yes, how often? _____ times per WEEK MONTH YEAR (circle one)
If yes, did this get start or get worse since your concussion? **YES NO**

Do you ever have trouble staying asleep? .....YES NO
If yes, how often? _____ times per WEEK MONTH YEAR (circle one)
If yes, did this start or get worse since your concussion? **YES NO**

Do you take more than two daytime naps per month? ..... **YES NO**
If yes, about how many times per week do you nap? ..... _____
At what time of day do you normally take your nap? ____:____ AM/PM to ____:____AM/PM
Do you consider yourself a light, normal, or heavy sleeper? .....**LIGHT NORMAL HEAVY**
Have you been told or do you think that you snore excessively? **YES NO**
Have you ever been diagnosed or treated for sleep apnea or sleep disordered breathing? **YES NO**

I yawn often
Never **1 2 3 4 5 6 7 8 9 10** Always yawning

When I see or hear someone else yawn, I will yawn too
Never **1 2 3 4 5 6 7 8 9 10** Every time

RECENT RISK OF DOZING OFF (ESS)

How likely are to doze off or fall asleep in the following situations, in contrast to feeling just tired? This refers to your **usual way of life in the last two weeks**. Even if you have not done some of these things recently try to work out how they would have affected you. Use the following scale to choose the most appropriate number for each situation:

0 = would never doze
1 = slight chance of dozing
2 = moderate chance of dozing
3 = high chance of dozing

SITUATION	CHANCE OF DOZING (0-3)			
Sitting and reading	0	1	2	3
Watching TV	0	1	2	3
Sitting, inactive in a public place (e.g. a theatre or meeting)	0	1	2	3
As a passenger in a car for an hour without a break	0	1	2	3
Lying down to rest in the afternoon when circumstances permit	0	1	2	3
Sitting and talking to someone	0	1	2	3
Sitting quietly after a lunch without alcohol	0	1	2	3
In a car, while stopped for a few minutes in the traffic	0	1	2	3

Second Day of Scan Information Questionnaire

Subject #: _____ Date: _____

CAFFEINE USE

Did you have any caffeine containing products today? If so, how much? _____
On average, how many cups of caffeinated coffee do you drink per day? _____
On average, how many cups of caffeinated tea do you drink per day? _____
On average, how many cans of caffeinated soda do you drink per day? _____
On average, how many caffeinated sports drinks do you drink per day? _____(brand)
Do you use any other caffeinated products, such as Vivarin? **YES NO**
If YES, **WHAT**? _____ How much?_____ How often? _____

PHYSICAL INFORMATION

If female, when was the start of your last menstrual period (be as precise as possible)?
Date of period:_____ or about _____days ago.

CURRENT SLEEP HABITS

How much sleep did you get last night? _____

In the past two weeks, how much do you typically sleep on weeknights (Sun-Thur)? _____

In the past two weeks, how much do you typically sleep on weekend nights (Fri-Sat)?_____

In the past two weeks, at what time do you normally go to bed at night on:
week nights (Sun-Thur)? _____ AM PM (midnight = 12 AM; noon = 12 PM)
weekends (Fri-Sat)? _____ AM PM

In the past two weeks, what time do you typically awaken on:
weekdays (Mon-Fri)? _____ AM PM
weekends (Sat-Sun)? _____ AM PM

In the past two weeks, how long does it typically take you to fall asleep at night?
on week nights (Sun-Thur)? _____ MIN HRS
on weekends (Fri-Sat)? _____ MIN HRS

In the past two weeks, at what time of day do you feel sleepiest? _____ AM PM
At what time of day do you feel most alert? _____ AM PM

In the past two weeks, how many hours do you need to sleep to feel your best? _____

"In the past two weeks…"
"If I get less than _____ hours of sleep, I notice an impairment in my ability to function at work."
"If I get more than _____ hours of sleep, I notice an impairment in my ability to function at work."

In the past two weeks:

Is daytime sleepiness currently a problem for you? .....**YES NO**

Are you currently doing shift work, that is, working early morning, evening, or night shifts?...YES NO

Do you ever have trouble falling asleep? .....YES NO
If yes, how often? _____ times per WEEK MONTH YEAR (circle one)

Do you ever have trouble staying asleep? .....YES NO
If yes, how often? _____ times per WEEK MONTH YEAR (circle one)

Do you take more than two daytime naps per month? ..... **YES NO**
If yes, about how many times per week do you nap? ..... _____
At what time of day do you normally take your nap? ____:____ AM/PM to ____:____AM/PM
Do you consider yourself a light, normal, or heavy sleeper? .....**LIGHT NORMAL HEAVY**
Have you been told or do you think that you snore excessively? **YES NO**
Have you ever been diagnosed or treated for sleep apnea or sleep disordered breathing? **YES NO**

I yawn often
Never **1 2 3 4 5 6 7 8 9 10** Always yawning

When I see or hear someone else yawn, I will yawn too
Never **1 2 3 4 5 6 7 8 9 10** Every time

RECENT RISK OF DOZING OFF (ESS)

How likely are to doze off or fall asleep in the following situations, in contrast to feeling just tired? This refers to your **usual way of life in the last two weeks**. Even if you have not done some of these things recently try to work out how they would have affected you. Use the following scale to choose the most appropriate number for each situation:

0 = would never doze
1 = slight chance of dozing
2 = moderate chance of dozing
3 = high chance of dozing

SITUATION	CHANCE OF DOZING (0-3)			
Sitting and reading	0	1	2	3
Watching TV	0	1	2	3
Sitting, inactive in a public place (e.g. a theatre or meeting)	0	1	2	3
As a passenger in a car for an hour without a break	0	1	2	3
Lying down to rest in the afternoon when circumstances permit	0	1	2	3
Sitting and talking to someone	0	1	2	3
Sitting quietly after a lunch without alcohol	0	1	2	3
In a car, while stopped for a few minutes in the traffic	0	1	2	3

Subject: _____ Date:_____

Read the following scenarios. Each scenario presents a situation and asks a question about the chance or likelihood that you would experience a particular outcome. For each one, think about how likely that outcome would be for YOU in that situation. Do NOT worry about how most people would do in a particular situation—just think about the chance that a particular outcome would happen to YOU in that situation. Circle the percent chance that best represents the probability that the outcome would happen to YOU.

1. You arrive 25 minutes late for a big job interview. What is the probability that YOU will get the job?

   0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

2. If you were to find yourself confronted by a vicious angry dog, what is the probability that YOU could get away unharmed?

   0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

3. Regardless of your moral convictions, if you were to shoplift a pair of $50 sunglasses from a chain drug store, what is the probability that YOU could get away with it without being caught?

   0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

4. While leaving a popular night club, you are attacked by a drunk man in his early 20s wielding a 10 inch knife. During the scuffle, your friend is stabbed, but not fatally. What is the chance that YOU will be killed during the attack?

   0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

5. While on vacation, you meet up with a stranger asking for help. Although the story the stranger tells you is heart wrenching and he seems very sincere, you are aware that he may just be a con-artist trying to scam you. If the stranger truly is a con-artist, what is the probability YOU will end up being scammed out of some of your money?

   0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

6. You awaken one morning realizing that you engaged in unprotected sex with someone you just met. Now that the alcohol has worn off, your partner remorsefully tells you that he/she has suffered for a long time with a very serious sexually transmitted disease. What is the chance that YOU will contract the sexually transmitted disease yourself after this contact?

   0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

7. While on vacation in a far away country, your 3 traveling companions have all contracted a bad case of diarrhea after drinking the water. You realize that you just drank some of the same water about an hour ago. What is the likelihood that YOU will come down with diarrhea too?

   0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

8. While on vacation in the woods, you decide to go hiking in an unfamiliar and thickly wooded area without a map or guide. What is the likelihood that YOU will get lost?

   0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

9. You have been at a nightclub for 4 hours. During that time you have had 7 alcoholic beverages. You are feeling a little "buzzed" but you decide to drive yourself home anyway because it is only about 5 miles away. What is the probability that YOU will make it home without any negative incident?

   0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

10. While playing golf one afternoon a thunderstorm comes up quickly. There is much wind and occasional lightning is hitting nearby. Because you are winning the game and only have two more holes to play, you decide to continue to the end. What is the likelihood that YOU will be struck by lightning before finishing the game?

    0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

11. While at your job you discover that one of your superiors has been embezzling large amounts of money from your organization. You decide to inform higher management of his illegal behavior. What is the chance that YOUR future career at the company will be harmed by reporting him?

    0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

12. Your company has a strict policy forbidding the removal of computer equipment from the work premises. However, you have a big project due that can only be completed if you "borrow" a company laptop computer over the weekend. What is the probability that YOU could secretly remove the computer for the weekend and return it to work on Monday without ever being caught?

    0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

13. You are a foreigner living in a war-torn country that is filled with violence and frequent sniper attacks. Although it is dark outside and there are many hostile insurgents in the area, you decide to drive alone and unarmed down a 10 mile stretch of empty highway to spend the weekend in the next town. What is the probability that YOU will be killed while making the trip?

    0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

14. While staying at a high rise hotel a bad fire breaks out several floors below yours. After hearing the fire alarm and smelling smoke, you quickly devise a plan of escape. What is the likelihood that YOU would be unable to figure out a way to escape and would die in the fire?

    0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

15. A severe natural disaster has devastated your town, resulting in widespread panic, looting, and deadly violence. The escape routes leading from the town are blocked with gridlock traffic and street gangs are killing at random and using violent means to steal limited necessities and survive. What is the chance that YOU will be able to outmaneuver the looters and escape the town unharmed?

    0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

16. You enter a competition in an arena in which you are particularly talented. What is the chance that YOU will ultimately win the competition?

    0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

17. You are sightseeing off a tall bridge where many individuals have tried to commit suicide by jumping to their deaths in the water below. Approximately half of all jumpers have not survived the long drop into the bay. Unfortunately, you stumble and are accidentally knocked off of the bridge. What is the likelihood that YOU would die in the fall?

    0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

18. Your biggest rival has challenged you in some way. What is the likelihood that YOU will ultimately defeat your rival at whatever he/she has challenged you with?

    0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

19. A bad automobile accident has just occurred in front of you. In one of the cars, the driver is unconscious and bleeding. You smell gas and notice that smoke is starting to billow out from the car. Afraid that the car may explode at any moment, you work to pull the unconscious driver from the car. What is the chance that YOU will die in the process of saving the driver?

    0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

20. While on vacation on a tropical island you decided to rent a small motor boat to do some sightseeing and fishing out along the island coast. After stopping the boat some distance from the shore you lay down to take a brief nap. Upon awakening you realize that you can no longer see the shore and notice that there is a fierce storm coming. What is the likelihood that YOU will die at sea?

    0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

MEQ

SUBJECT:_____ DATE: _____/_____/_____

1. Considering only your own "feeling best" rhythm, at what time would you get up if you were entirely free to plan your day?
   - _____5:00 - 6:30 AM
   - _____6:30 - 7:45 AM
   - _____7:45 - 9:45 AM
   - _____9:45 - 11:00 AM
   - _____11:00 AM - 12:00 PM

2. Considering only your own "feeling best" rhythm, at what time would you go to bed if you were entirely free to plan your evening?
   - _____8:00 - 9:00 PM
   - _____9:00 - 10:15 PM
   - _____10:15 PM - 12:30 AM
   - _____12:30 - 1:45 AM
   - _____1:45 - 3:00 AM

3. If there is a specific time at which you have to get up in the morning, to what extent are you dependent on being woken up by an alarm clock?
   - _____not at all dependent
   - _____slightly dependent
   - _____fairly dependent
   - _____very dependent

4. Assuming adequate environmental conditions, how easy do you find getting up in the mornings?
   - _____not at all easy
   - _____not very easy
   - _____fairly easy
   - _____very easy

5. How alert do you feel during the first half hour after having woken in the mornings?
   - _____not at all alert
   - _____slightly alert
   - _____fairly alert
   - _____very alert

6. How is your appetite during the first half-hour after having woken in the mornings?
   - _____very poor
   - _____fairly poor
   - _____fairly good
   - _____very good

7. During the first half-hour after having woken in the morning, how tired do you feel?
   - _____very tired
   - _____fairly tired
   - _____fairly refreshed
   - _____very refreshed

8. When you have no commitments the next day, at what time do you go to bed compared to your usual bedtime?

_____seldom or never later
_____less than one hour later
_____1-2 hours later
_____more than two hours later

9. You have decided to engage in some physical exercise. A friend suggests that you do this one hour twice a week and the best time for him is between 7:00-8:00 AM. Bearing in mind nothing else but your own "feeling best" rhythm how do you think you would perform?
____would be in good form
_____would be in reasonable for
_____would find it difficult
_____would find it very difficult

10. At what time in the evening do you feel tired and as a result in need of sleep?
_____8:00 - 9:00 PM
_____9:00 - 10:15 PM
____10:15 PM - 12:45 AM
____12:45 - 2:00 AM
____2:00 - 3:00 AM

11. You wish to be at your peak performance for a test which you know is going to be mentally exhausting and lasting for two hours. You are entirely free to plan your day and considering only your own "feeling best" rhythm which ONE of the four testing times would you choose?
_____8:00 - 10:00 AM
_____11:00 AM - 1:00 PM
_____3:00 - 5:00 PM
_____7:00 - 9:00 PM

12. If you went to bed at 11:00 PM at what level of tiredness would you be?
_____not at all tired
_____a little tired
_____fairly tired
_____very tired

13. For some reason you have gone to bed several hours later than usual, but there is no need to get up at any particular time the next morning. Which ONE of the following events are you most likely to experience?
_____will wake up at usual time and will NOT fall asleep
_____will wake up at usual time and will doze thereafter
_____will wake up at usual time but will fall asleep again
_____will NOT wake up until later than usual

14. One night you have to remain awake between 4:00 - 6:00 AM in order to carry out a night watch. You have no commitments the next day. Which ONE of the following alternatives will suit you best?
_____would NOT go to bed until watch was over
_____would take a nap before and sleep after
_____would take a good sleep before and nap after
_____would take ALL sleep before watch

15. You have to do two hours of hard physical work. You are entirely free to plan your day and considering only your own "feeling best" rhythm which ONE of the following times would you choose?
    _____8:00 - 10:00 AM
    _____11:00 AM - 1:00 PM
    _____3:00 - 5:00 PM
    _____7:00 - 9:00 PM

16. You have decided to engage in hard physical exercise. A friend suggests that you do this for one hour twice a week and the best time for him is between 10:00 - 11:00 PM. Bearing in mind nothing else but your own "feeling best" rhythm how well do you think you would perform?
    _____would be in good form
    _____would be in reasonable form
    _____would find it difficult
    _____would find it very difficult

17. Suppose that you can choose your own work hours. Assume that you worked a FIVE-hour day (including breaks) and that your job was interesting and paid by results. During which time period would you want that five consecutive hours to END?
    _____12:00 - 4:00 AM
    _____4:00 - 8:00 AM
    _____8:00 - 9:00 AM
    _____9:00 AM - 2:00 PM
    _____2:00 - 5:00 PM
    _____5:00 PM - 12:00 AM

18. At what time of the day do you think that you reach your "feeling best" peak?
    _____12:00 - 5:00 AM
    _____5:00 - 8:00 AM
    _____8:00 - 10:00 AM
    _____10:00 AM - 5:00 PM
    _____5:00 - 10:00 PM
    _____10:00 PM - 12:00 AM

19. One hears about "morning" and "evening" types of people. Which ONE of these types do you consider yourself to be?
    _____definitely a "morning" person
    _____rather more a "morning" than an "evening" type
    _____rather more an "evening" than a "morning" type
    _____definitely an "evening" type

M.I.N.I.

MINI INTERNATIONAL NEUROPSYCHIATRIC INTERVIEW

English Version 6.0.0

DSM-IV

USA: **D. Sheehan[1], J. Janavs, K. Harnett-Sheehan, M. Sheehan, C. Gray.**
[1]University of South Florida College of Medicine- Tampa, USA

EU: **Y. Lecrubier[2], E. Weiller, T. Hergueta, C. Allgulander, N. Kadri, D. Baldwin, C. Even.**
[2]Centre Hospitalier Sainte-Anne – Paris, France

DISCLAIMER

Our aim is to assist in the assessment and tracking of patients with greater efficiency and accuracy. Before action is taken on any data collected and processed by this program, it should be reviewed and interpreted by a licensed clinician.

This program is not designed or intended to be used in the place of a full medical and psychiatric evaluation by a qualified licensed physician – psychiatrist. It is intended only as a tool to facilitate accurate data collection and processing of symptoms elicited by trained personnel.

Patient Name:		***Patient Number:***	
Date of Birth:		***Time Interview Began:***	
Interviewer's Name:		***Time Interview Ended:***	
Date of Interview:		***Total Time:***	

	MODULES	TIME FRAME	MEETS CRITERIA	DSM-IV-TR	ICD-10	PRIMARY DIAGNOSIS
A	MAJOR DEPRESSIVE EPISODE	Current (2 weeks)	☐	296.20-296.26 Single	F32.x	☐
		Past	☐	296.20-296.26 Single	F32.x	☐
		Recurrent	☐	296.30-296.36 Recurrent	F33.x	☐
B	SUICIDALITY	Current (Past Month) ☐ Low ☐ Moderate ☐ High	☐			
C	MANIC EPISODE	Current	☐	296.00-296.06	F30.x-F31.9	☐
		Past	☐			
	HYPOMANIC EPISODE	Current	☐	296.80-296.89	F31.8-F31.9/F34.0	☐
		Past	☐			
	BIPOLAR I DISORDER	Current	☐	296.0x-296.6x	F30.x-F31.9	☐
		Past	☐	296.0x-296.6x	F30.x-F31.9	☐
	BIPOLAR II DISORDER	Current	☐	296.89	F31.8	☐
		Past	☐	296.89	F31.8	☐
	BIPOLAR DISORDER NOS	Current	☐	296.80	F31.9	☐
		Past	☐	296.80	F31.9	☐
D	PANIC DISORDER	Current (Past Month)	☐	300.01/300.21	F40.01-F41.0	☐
		Lifetime	☐			
E	AGORAPHOBIA	Current	☐	300.22	F40.00	☐
F	SOCIAL PHOBIA (Social Anxiety Disorder)	Current (Past Month)				
		Generalized	☐	300.23	F40.1	☐
		Non-Generalized	☐	300.23	F40.1	☐
G	OBSESSIVE-COMPULSIVE DISORDER	Current (Past Month)	☐	300.3	F42.8	☐
H	POSTTRAUMATIC STRESS DISORDER	Current (Past Month)	☐	309.81	F43.1	☐
I	ALCOHOL DEPENDENCE	Past 12 Months	☐	303.9	F10.2x	☐
	ALCOHOL ABUSE	Past 12 Months	☐	305.00	F10.1	☐
J	SUBSTANCE DEPENDENCE (Non-alcohol)	Past 12 Months	☐	304.00-.90/305.20-.90	F11.1-F19.1	☐
	SUBSTANCE ABUSE (Non-alcohol)	Past 12 Months	☐	304.00-.90/305.20-.90	F11.1-F19.1	☐
K	PSYCHOTIC DISORDERS	Lifetime	☐	295.10-295.90/297.1/	F20.xx-F29	☐
		Current	☐	297.3/293.81/293.82/ 293.89/298.8/298.9		
	MOOD DISORDER WITH	Lifetime	☐	296.24/296.34/296.44	F32.3/F33.3/	☐
	PSYCHOTIC FEATURES	Current	☐	296.24/296.34/296.44	F30.2/F31.2/F31.5 F31.8/F31.9/F39	☐
L	ANOREXIA NERVOSA	Current (Past 3 Months)	☐	307.1	F50.0	☐
M	BULIMIA NERVOSA	Current (Past 3 Months)	☐	307.51	F50.2	☐
	ANOREXIA NERVOSA, BINGE EATING/PURGING TYPE	Current	☐	307.1	F50.0	☐
N	GENERALIZED ANXIETY DISORDER	Current (Past 6 Months)	☐	300.02	F41.1	☐
O	MEDICAL, ORGANIC, DRUG CAUSE RULED OUT		☐ No	☐ Yes ☐Uncertain		
P	ANTISOCIAL PERSONALITY DISORDER	Lifetime	☐	301.7	F60.2	☐

IDENTIFY THE PRIMARY DIAGNOSIS BY CHECKING THE APPROPRIATE CHECK BOX.
(Which problem troubles you the most or dominates the others or came first in the natural history?)

The translation from DSM-IV-TR to ICD-10 coding is not always exact. For more information on this topic see Schulte-Markwort. Crosswalks ICD-10/DSM-IV-TR. Hogrefe & Huber Publishers 2006.

GENERAL INSTRUCTIONS

The M.I.N.I. was designed as a brief structured interview for the major Axis I psychiatric disorders in DSM-IV and ICD-10. Validation and reliability studies have been done comparing the M.I.N.I. to the SCID-P for DSM-III-R and the CIDI (a structured interview developed by the World Health Organization). The results of these studies show that the M.I.N.I. has similar reliability and validity properties, but can be administered in a much shorter period of time (mean 18.7 ± 11.6 minutes, median 15 minutes) than the above referenced instruments. It can be used by clinicians, after a brief training session. Lay interviewers require more extensive training.

INTERVIEW:

In order to keep the interview as brief as possible, inform the patient that you will conduct a clinical interview that is more structured than usual, with very precise questions about psychological problems which require a yes or no answer.

GENERAL FORMAT:

The M.I.N.I. is divided into **modules** identified by letters, each corresponding to a diagnostic category.

•At the beginning of each diagnostic module (except for psychotic disorders module), screening question(s) corresponding to the main criteria of the disorder are presented in a **gray box**.

•At the end of each module, diagnostic box(es) permit the clinician to indicate whether diagnostic criteria are met.

CONVENTIONS:

Sentences written in « normal font » should be read exactly as written to the patient in order to standardize the assessment of diagnostic criteria.

Sentences written in « CAPITALS » should not be read to the patient. They are instructions for the interviewer to assist in the scoring of the diagnostic algorithms.

Sentences written in « **bold** » indicate the time frame being investigated. The interviewer should read them as often as necessary. Only symptoms occurring during the time frame indicated should be considered in scoring the responses.

Answers with an arrow above them (➡) indicate that one of the criteria necessary for the diagnosis(es) is not met. In this case, the interviewer should go to the end of the module, circle « **NO** » in all the diagnostic boxes and move to the next module.

When terms are separated by a *slash (/)* the interviewer should read only those symptoms known to be present in the patient (for example, question G6).

Phrases in (parentheses) are clinical examples of the symptom. These may be read to the patient to clarify the question.

RATING INSTRUCTIONS:

All questions must be rated. The rating is done at the right of each question by circling either Yes or No. Clinical judgment by the rater should be used in coding the responses. Interviewers need to be sensitive to the diversity of cultural beliefs in their administration of questions and rating of responses. The rater should ask for examples when necessary, to ensure accurate coding. The patient should be encouraged to ask for clarification on any question that is not absolutely clear.

The clinician should be sure that each dimension of the question is taken into account by the patient (for example, time frame, frequency, severity, and/or alternatives).

Symptoms better accounted for by an organic cause or by the use of alcohol or drugs should not be coded positive in the M.I.N.I. The M.I.N.I. Plus has questions that investigate these issues.

For any questions, suggestions, need for a training session or information about updates of the M.I.N.I., please contact:

David V Sheehan, M.D., M.B.A.
University of South Florida College of Medicine
3515 East Fletcher Ave, Tampa, FL USA 33613-4706
tel : +1 813 974 4544; fax : +1 813 974 4575
e-mail : dsheehan@health.usf.edu

Yves Lecrubier, M.D. / Christian Even, M.D.
Centre Hospitalier Sainte-Anne
Clinique des Maladies Mentales de l'Encéphale
100 rue de la Santé, 75674 Paris Cedex 14, France
tel : +33 (0) 1 53 80 49 41; fax : +33 (0) 1 45 65 88 54
e-mail: ylecrubier@noos.fr or even-sainteanne@orange.fr

A. MAJOR DEPRESSIVE EPISODE

(➡ MEANS : GO TO THE DIAGNOSTIC BOXES, CIRCLE **NO** IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

A1	a	Were you ever depressed or down, most of the day, nearly every day, for two weeks?	NO	YES
		IF NO, CODE NO TO **A1b**: IF **YES** ASK:		
	b	For the past two weeks, were you depressed or down, most of the day, nearly every day?	NO	YES
A2	a	Were you ever much less interested in most things or much less able to enjoy the things you used to enjoy most of the time, for two weeks?	NO	YES
		IF NO, CODE NO TO **A2b**: IF **YES** ASK:		
	b	In the past two weeks, were you much less interested in most things or much less able to enjoy the things you used to enjoy, most of the time?	NO	YES
		➡ IS **A1a** OR **A2a** CODED **YES**?	NO	YES

A3 IF **A1b** OR **A2b** = **YES**: EXPLORE THE **CURRENT** AND THE MOST SYMPTOMATIC **PAST** EPISODE, OTHERWISE
IF **A1b** AND **A2b** = **NO**: EXPLORE ONLY THE MOST SYMPTOMATIC **PAST** EPISODE

Over that two week period, when you felt depressed or uninterested:

		Past 2 Weeks		Past Episode	
a	Was your appetite decreased or increased nearly every day? Did your weight decrease or increase without trying intentionally (i.e., by ±5% of body weight or ±8 lbs. or ±3.5 kgs., for a 160 lb./70 kg. person in a month)? IF **YES** TO EITHER, CODE **YES**.	NO	YES	NO	YES
b	Did you have trouble sleeping nearly every night (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively)?	NO	YES	NO	YES
c	Did you talk or move more slowly than normal or were you fidgety, restless or having trouble sitting still almost every day?	NO	YES	NO	YES
d	Did you feel tired or without energy almost every day?	NO	YES	NO	YES
e	Did you feel worthless or guilty almost every day?	NO	YES	NO	YES
	IF **YES**, ASK FOR EXAMPLES. THE EXAMPLES ARE CONSISTENT WITH A DELUSIONAL IDEA. Current Episode ❒ No ❒ Yes; Past Episode ❒ No ❒ Yes				
f	Did you have difficulty concentrating or making decisions almost every day?	NO	YES	NO	YES
g	Did you repeatedly consider hurting yourself, feel suicidal, or wish that you were dead? Did you attempt suicide or plan a suicide? IF **YES TO EITHER, CODE YES.**	NO	YES	NO	YES
A4	Did these symptoms cause significant problems at home, at work, socially, at school or in some other important way?	NO	YES	NO	YES

A5 In between 2 episodes of depression, did you ever have an interval of at least 2 months, without any significant depression or any significant loss of interest? NO YES

ARE **5** OR MORE ANSWERS (**A1-A3**) CODED **YES** AND IS **A4** CODED YES FOR THAT TIME FRAME?

SPECIFY IF THE EPISODE IS CURRENT AND / OR PAST.

IF **A5** IS CODED **YES,** CODE **YES** FOR RECURRENT.

NO	**YES**
MAJOR DEPRESSIVE EPISODE	
CURRENT	❒
PAST	❒
RECURRENT	❒

A6 a How many episodes of depression did you have in your lifetime? _____

Between each episode there must be at least 2 months without any significant depression.

B. SUICIDALITY

				Points
	In the past month did you:			
B1	Suffer any accident? IF NO TO B1, SKIP TO B2; IF YES, ASK B1a:	NO	YES	0
B1a	Plan or intend to hurt yourself in that accident either actively or passively (e.g. not avoiding a risk)? IF NO TO B1a, SKIP TO B2: IF YES, ASK B1b:	NO	YES	0
B1b	Intend to die as a result of this accident?	NO	YES	0
B2	Feel hopeless?	NO	YES	1
B3	Think that you would be better off dead or wish you were dead?	NO	YES	1
B4	Want to harm yourself or to hurt or to injure yourself or have mental images of harming yourself?	NO	YES	2
B5	Think about suicide? IF NO TO B5, SKIP TO B7. OTHERWISE ASK:	NO	YES	6

Frequency		Intensity	
Occasionally	❒	Mild	❒
Often	❒	Moderate	❒
Very often	❒	Severe	❒

	Can you state that you will not act on these impulses during this treatment program?	NO	YES	
B6	Feel unable to control these impulses?	NO	YES	8
B7	Have a suicide plan?	NO	YES	8
B8	Take any active steps to prepare to injure yourself or to prepare for a suicide attempt in which you expected or intended to die?	NO	YES	9
B9	Deliberately injure yourself without intending to kill yourself?	NO	YES	4
B10	Attempt suicide? IF NO SKIP TO B11: Hope to be rescued / survive ❒ Expected / intended to die ❒	NO	YES	9
	In your lifetime:			
B11	Did you ever make a suicide attempt?	NO	YES	4

IS AT LEAST **1** OF THE ABOVE (EXCEPT B1) CODED **YES**?

IF YES, ADD THE TOTAL POINTS FOR THE ANSWERS (B1-B11) CHECKED 'YES' AND SPECIFY THE SUICIDALITY SCORE AS INDICATED IN THE DIAGNOSTIC BOX:

MAKE ANY ADDITIONAL COMMENTS ABOUT YOUR ASSESSMENT OF THIS PATIENT'S CURRENT AND NEAR FUTURE SUICIDALITY IN THE SPACE BELOW:

NO **YES**

SUICIDALITY CURRENT

1-8 points	Low	❒
9-16 points	Moderate	❒
≥ 17 points	High	❒

C. MANIC AND HYPOMANIC EPISODES

(➡ MEANS : GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN MANIC AND HYPOMANIC DIAGNOSTIC BOXES, AND MOVE TO NEXT MODULE)

Do you have any family history of manic depressive illness or bipolar disorder, or any family member who had mood swings treated with a medication like lithium, sodium valproate (Depakote) or lamotrigine (Lamictal)? NO YES

THIS QUESTION IS NOT A CRITERION FOR BIPOLAR DISORDER, BUT IS ASKED TO INCREASE THE CLINICIAN'S VIGILANCE ABOUT THE RISK FOR BIPOLAR DISORDER .

IF YES, PLEASE SPECIFY WHO:_____

C1 a Have you **ever** had a period of time when you were feeling 'up' or 'high' or 'hyper' or so full of energy or full of yourself that you got into trouble, - or that other people thought you were not your usual self? (Do not consider times when you were intoxicated on drugs or alcohol.) NO YES

IF PATIENT IS PUZZLED OR UNCLEAR ABOUT WHAT YOU MEAN BY 'UP' OR 'HIGH' OR 'HYPER', CLARIFY AS FOLLOWS: By 'up' or 'high' or 'hyper' I mean: having elated mood; increased energy; needing less sleep; having rapid thoughts; being full of ideas; having an increase in productivity, motivation, creativity, or impulsive behavior; phoning or working excessively or spending more money.

IF NO, CODE NO TO **C1b**: IF **YES** ASK:

b Are you currently feeling 'up' or 'high' or 'hyper' or full of energy? NO YES

C2 a Have you **ever** been persistently irritable, for several days, so that you had arguments or verbal or physical fights, or shouted at people outside your family? Have you or others noticed that you have been more irritable or over reacted, compared to other people, even in situations that you felt were justified? NO YES

IF NO, CODE NO TO **C2b**: IF **YES** ASK:

b Are you currently feeling persistently irritable? NO YES

➡

IS **C1a** OR **C2a** CODED **YES**? NO YES

C3 IF **C1b** OR **C2b** = **YES**: EXPLORE THE **CURRENT** AND THE MOST SYMPTOMATIC **PAST** EPISODE, OTHERWISE
IF **C1b** AND **C2b** = **NO**: EXPLORE ONLY THE MOST SYMPTOMATIC **PAST** EPISODE

During the times when you felt high, full of energy, or irritable did you:

		Current Episode		Past Episode	
a	Feel that you could do things others couldn't do, or that you were an especially important person? IF **YES**, ASK FOR EXAMPLES. THE EXAMPLES ARE CONSISTENT WITH A DELUSIONAL IDEA. Current Episode ❒ No ❒ Yes Past Episode ❒ No ❒ Yes	NO	YES	NO	YES
b	Need less sleep (for example, feel rested after only a few hours sleep)?	NO	YES	NO	YES
c	Talk too much without stopping, or so fast that people had difficulty understanding?	NO	YES	NO	YES
d	Have racing thoughts?	NO	YES	NO	YES

		Current Episode		Past Episode	
e	Become easily distracted so that any little interruption could distract you?	NO	YES	NO	YES
f	Have a significant increase in your activity or drive, at work, at school, socially or sexually or did you become physically or mentally restless?	NO	YES	NO	YES
g	Want so much to engage in pleasurable activities that you ignored the risks or consequences (for example, spending sprees, reckless driving, or sexual indiscretions)?	NO	YES	NO	YES

C3 SUMMARY: WHEN RATING CURRENT EPISODE: NO YES NO YES

IF C1b IS NO, ARE 4 OR MORE C3 ANSWERS CODED YES?
IF C1b IS YES, ARE 3 OR MORE C3 ANSWERS CODED YES?

WHEN RATING PAST EPISODE:
IF C1a IS NO, ARE 4 OR MORE C3 ANSWERS CODED YES?
IF C1a IS YES, ARE 3 OR MORE C3 ANSWERS CODED YES?

CODE YES ONLY IF THE ABOVE 3 OR 4 SYMPTOMS OCCURRED DURING THE SAME TIME PERIOD.

RULE: ELATION/EXPANSIVENESS REQUIRES ONLY THREE C3 SYMPTOMS, WHILE IRRITABLE MOOD ALONE REQUIRES 4 OF THE C3 SYMPTOMS.

C4	What is the longest time these symptoms lasted?				
	a) 3 days or less		❒		❒
	b) 4 to 6 days		❒		❒
	c) 7 days or more		❒		❒
C5	Were you hospitalized for these problems?	NO	YES	NO	YES

IF YES, STOP HERE AND CIRCLE YES IN MANIC EPISODE FOR THAT TIME FRAME.

C6	Did these symptoms cause significant problems at home, at work, socially in your relationships with others, at school or in some other important way?	NO	YES	NO	YES

ARE **C3** SUMMARY AND **C5** AND **C6** CODED **YES** AND EITHER **C4a or b or c** CODED **YES**?

OR

ARE **C3** SUMMARY AND **C4c** AND **C6** CODED **YES** AND IS **C5** CODED **NO**?

SPECIFY IF THE EPISODE IS CURRENT AND / OR PAST.

NO **YES**

MANIC EPISODE

CURRENT ❒
PAST ❒

ARE **C3** SUMMARY **AND C5** AND **C6** CODED **NO** AND EITHER **C4b** OR **C4c** CODED **YES**?

OR

ARE **C3** SUMMARY AND **C4b** AND **C6** CODED **YES** AND IS **C5** CODED **NO?**

SPECIFY IF THE EPISODE IS CURRENT AND / OR PAST.

NO **YES**

HYPOMANIC EPISODE

CURRENT ❒
PAST ❒

ARE **C3** SUMMARY AND **C4a** CODED **YES** AND IS **C5** CODED **NO**? **NO** **YES**

HYPOMANIC SYMPTOMS

SPECIFY IF THE EPISODE IS CURRENT AND / OR PAST.

CURRENT ❒
PAST ❒

C7 a) IF MANIC EPISODE IS POSITIVE FOR EITHER CURRENT OR PAST ASK:
Did you have 2 or more manic episodes (**C4c**) in your lifetime (including the current episode if present)? NO YES

b) IF HYPOMANIC EPISODE IS POSITIVE FOR EITHER CURRENT OR PAST ASK:
Did you have 2 or more hypomanic EPISODES (**C4b**) in your lifetime (including the current episode)? NO YES

c) IF PAST "HYPOMANIC SYMPTOMS" IS CODED POSITIVE ASK:
Did you have 2 or more episodes of hypomanic SYMPTOMS (**C4a**) in your lifetime
(including the current episode if present)? NO YES

D. PANIC DISORDER

(➡ MEANS : CIRCLE NO IN D5, D6 AND D7 AND SKIP TO E1)

D1	a	Have you, on more than one occasion, had spells or attacks when you **suddenly** felt anxious, frightened, uncomfortable or uneasy, even in situations where most people would not feel that way?	➡ NO	YES
	b	Did the spells surge to a peak within 10 minutes of starting?	➡ NO	YES
D2		At any time in the past, did any of those spells or attacks come on unexpectedly or occur in an unpredictable or unprovoked manner?	➡ NO	YES
D3		Have you ever had one such attack followed by a month or more of persistent concern about having another attack, or worries about the consequences of the attack - or did you make a significant change in your behavior because of the attacks (e.g., shopping only with a companion, not wanting to leave your house, visiting the emergency room repeatedly, or seeing your doctor more frequently because of the symptoms)?	NO	YES
D4		**During the worst attack that you can remember:**		
	a	Did you have skipping, racing or pounding of your heart?	NO	YES
	b	Did you have sweating or clammy hands?	NO	YES
	c	Were you trembling or shaking?	NO	YES
	d	Did you have shortness of breath or difficulty breathing?	NO	YES
	e	Did you have a choking sensation or a lump in your throat?	NO	YES
	f	Did you have chest pain, pressure or discomfort?	NO	YES
	g	Did you have nausea, stomach problems or sudden diarrhea?	NO	YES
	h	Did you feel dizzy, unsteady, lightheaded or faint?	NO	YES
	i	Did things around you feel strange, unreal, detached or unfamiliar, or did you feel outside of or detached from part or all of your body?	NO	YES
	j	Did you fear that you were losing control or going crazy?	NO	YES
	k	Did you fear that you were dying?	NO	YES
	l	Did you have tingling or numbness in parts of your body?	NO	YES
	m	Did you have hot flushes or chills?	NO	YES
D5		ARE BOTH **D3,** AND **4** OR MORE **D4** ANSWERS, CODED **YES**? IF YES TO D5, SKIP TO D7.	NO	YES *PANIC DISORDER LIFETIME*
D6		IF **D5** = **NO,** ARE ANY D4 ANSWERS CODED **YES**? THEN SKIP TO **E1.**	NO	YES *LIMITED SYMPTOM ATTACKS LIFETIME*

D7 In the past month, did you have such attacks repeatedly (2 or more), and did you have persistent concern about having another attack, or worry about the consequences of the attacks, or did you change your behavior in any way because of the attacks? NO YES

PANIC DISORDER CURRENT

E. AGORAPHOBIA

E1 Do you feel anxious or uneasy in places or situations where help might not be available or escape might be difficult, like being in a crowd, standing in a line (queue), when you are alone away from home or alone at home, or when crossing a bridge, or traveling in a bus, train or car or where you might have a panic attack or the panic-like symptoms we just spoke about? NO YES

IF **E1** = **NO**, CIRCLE **NO** IN **E2**.

E2 Do you fear these situations so much that you avoid them, or suffer through them, or need a companion to face them? NO YES

AGORAPHOBIA CURRENT

IS **E2** (CURRENT AGORAPHOBIA) CODED **YES**

and

IS **D7** (CURRENT PANIC DISORDER) CODED **YES**?

NO **YES**

PANIC DISORDER with Agoraphobia CURRENT

IS **E2** (CURRENT AGORAPHOBIA) CODED **NO**

and

IS **D7** (CURRENT PANIC DISORDER) CODED **YES**?

NO **YES**

PANIC DISORDER without Agoraphobia CURRENT

IS **E2** (CURRENT AGORAPHOBIA) CODED **YES**

and

IS **D5** (PANIC DISORDER LIFETIME) CODED **NO**?

NO **YES**

AGORAPHOBIA, CURRENT without history of Panic Disorder

F. SOCIAL PHOBIA (Social Anxiety Disorder)

(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO AND MOVE TO THE NEXT MODULE)

F1	In the past month, did you have persistent fear and significant anxiety at being watched, being the focus of attention, or of being humiliated or embarrassed? This includes things like speaking in public, eating in public or with others, writing while someone watches, or being in social situations.	➡ NO	YES
F2	Is this social fear excessive or unreasonable and does it almost always make you anxious?	➡ NO	YES
F3	Do you fear these social situations so much that you avoid them or suffer through them most of the time?	➡ NO	YES
F4	Do these social fears disrupt your normal work, school or social functioning or cause you significant distress?		

SUBTYPES

Do you fear and avoid 4 or more social situations?

If YES Generalized social phobia (social anxiety disorder)

If NO Non-generalized social phobia (social anxiety disorder)

EXAMPLES OF SUCH SOCIAL SITUATIONS TYPICALLY INCLUDE

- INITIATING OR MAINTAINING A CONVERSATION,
- PARTICIPATING IN SMALL GROUPS,
- DATING,
- SPEAKING TO AUTHORITY FIGURES,
- ATTENDING PARTIES,
- PUBLIC SPEAKING,
- EATING IN FRONT OF OTHERS,
- URINATING IN A PUBLIC WASHROOM, ETC.

NOTE TO INTERVIEWER: PLEASE ASSESS WHETHER THE SUBJECT'S FEARS ARE RESTRICTED TO NON-GENERALIZED ("ONLY 1 OR SEVERAL") SOCIAL SITUATIONS OR EXTEND TO GENERALIZED ("MOST") SOCIAL SITUATIONS. "MOST" SOCIAL SITUATIONS IS USUALLY OPERATIONALIZED TO MEAN 4 OR MORE SOCIAL SITUATIONS, ALTHOUGH THE DSM-IV DOES NOT EXPLICITLY STATE THIS.

NO **YES**

SOCIAL PHOBIA
(Social Anxiety Disorder)
CURRENT

GENERALIZED ❒

NON-GENERALIZED ❒

G. OBSESSIVE-COMPULSIVE DISORDER

(➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO AND MOVE TO THE NEXT MODULE)

G1	In the past month, have you been bothered by recurrent thoughts, impulses, or images that were unwanted, distasteful, inappropriate, intrusive, or distressing? - (For example, the idea that you were dirty, contaminated or had germs, **or** fear of contaminating others, **or** fear of harming someone even though it disturbs or distresses you, or fear you would act on some impulse, **or** fear or superstitions that you would be responsible for things going wrong, **or** obsessions with sexual thoughts, images or impulses, **or** hoarding, collecting, **or** religious obsessions.) (DO NOT INCLUDE SIMPLY EXCESSIVE WORRIES ABOUT REAL LIFE PROBLEMS. DO NOT INCLUDE OBSESSIONS DIRECTLY RELATED TO EATING DISORDERS, SEXUAL DEVIATIONS, PATHOLOGICAL GAMBLING, OR ALCOHOL OR DRUG ABUSE BECAUSE THE PATIENT MAY DERIVE PLEASURE FROM THE ACTIVITY AND MAY WANT TO RESIST IT ONLY BECAUSE OF ITS NEGATIVE CONSEQUENCES.)	NO YES ↓ SKIP TO **G4**
G2	Did they keep coming back into your mind even when you tried to ignore or get rid of them?	NO YES ↓ SKIP TO **G4**
G3	Do you think that these obsessions are the product of your own mind and that they are not imposed from the outside?	NO YES **obsessions**
G4	In the past month, did you do something repeatedly without being able to resist doing it, like washing or cleaning excessively, counting or checking things over and over, or repeating, collecting, arranging things, or other superstitious rituals?	NO YES **compulsions**
	IS **G3** OR **G4** CODED **YES**?	➡ NO YES
G5	At any point, did you recognize that either these obsessive thoughts or these compulsive behaviors were excessive or unreasonable?	➡ NO YES
G6	In the past month, did these obsessive thoughts and/or compulsive behaviors significantly interfere with your normal routine, your work or school, your usual social activities, or relationships, or did they take more than one hour a day?	**NO YES** ***O.C.D. CURRENT***

H. POSTTRAUMATIC STRESS DISORDER

(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

H1	Have you ever experienced or witnessed or had to deal with an extremely traumatic event that included actual or threatened death or serious injury to you or someone else? EXAMPLES OF TRAUMATIC EVENTS INCLUDE: SERIOUS ACCIDENTS, SEXUAL OR PHYSICAL ASSAULT, A TERRORIST ATTACK, BEING HELD HOSTAGE, KIDNAPPING, FIRE, DISCOVERING A BODY, WAR, OR NATURAL DISASTER, WITNESSING THE VIOLENT OR SUDDEN DEATH OF SOMEONE CLOSE TO YOU, OR A LIFE THREATENING ILLNESS.	➡ NO	YES
H2	Did you respond with intense fear, helplessness or horror?	➡ NO	YES
H3	During the past month, have you re-experienced the event in a distressing way (such as in dreams, intense recollections, flashbacks or physical reactions) or did you have intense distress when you were reminded about the event or exposed to a similar event?	➡ NO	YES

H4	**In the past month:**			
	a	Have you avoided thinking about or talking about the event ?	NO	YES
	b	Have you avoided activities, places or people that remind you of the event?	NO	YES
	c	Have you had trouble recalling some important part of what happened?	NO	YES
	d	Have you become much less interested in hobbies or social activities?	NO	YES
	e	Have you felt detached or estranged from others?	NO	YES
	f	Have you noticed that your feelings are numbed?	NO	YES
	g	Have you felt that your life will be shortened or that you will die sooner than other people?	NO	YES
		ARE **3** OR MORE **H4** ANSWERS CODED **YES**?	➡ NO	YES
H5	**In the past month:**			
	a	Have you had difficulty sleeping?	NO	YES
	b	Were you especially irritable or did you have outbursts of anger?	NO	YES
	c	Have you had difficulty concentrating?	NO	YES
	d	Were you nervous or constantly on your guard?	NO	YES
	e	Were you easily startled?	NO	YES
		ARE **2** OR MORE **H5** ANSWERS CODED **YES**?	➡ NO	YES

H6	During the past month, have these problems significantly interfered with your work, school or social activities, or caused significant distress?	**NO**	**YES**
		POSTTRAUMATIC STRESS DISORDER CURRENT	

I. ALCOHOL DEPENDENCE / ABUSE

(➡ MEANS: GO TO DIAGNOSTIC BOXES, CIRCLE NO IN BOTH AND MOVE TO THE NEXT MODULE)

		➡	
I1	**In the past 12 months**, have you had 3 or more alcoholic drinks, - within a 3 hour period, - on 3 or more occasions?	NO	YES

I2 **In the past 12 months**:

a	Did you need to drink a lot more in order to get the same effect that you got when you first started drinking or did you get much less effect with continued use of the same amount?	NO	YES
b	When you cut down on drinking did your hands shake, did you sweat or feel agitated? Did you drink to avoid these symptoms (for example, "the shakes", sweating or agitation) or to avoid being hungover? IF **YES** TO ANY, CODE **YES**.	NO	YES
c	During the times when you drank alcohol, did you end up drinking more than you planned when you started?	NO	YES
d	Have you tried to reduce or stop drinking alcohol but failed?	NO	YES
e	On the days that you drank, did you spend substantial time in obtaining alcohol, drinking, or in recovering from the effects of alcohol?	NO	YES
f	Did you spend less time working, enjoying hobbies, or being with others because of your drinking?	NO	YES
g	If your drinking caused you health or mental problems, did you still keep on drinking?	NO	YES

ARE **3** OR MORE **I2** ANSWERS CODED **YES**?

***** IF YES, SKIP I3 QUESTIONS AND GO TO NEXT MODULE. "DEPENDENCE PREEMPTS ABUSE" IN DSM IV TR.

NO	YES*
ALCOHOL DEPENDENCE **CURRENT**	

I3 **In the past 12 months:**

a	Have you been intoxicated, high, or hungover more than once when you had other responsibilities at school, at work, or at home? Did this cause any problems? (CODE **YES** ONLY IF THIS CAUSED PROBLEMS.)	NO	YES
b	Were you intoxicated more than once in any situation where you were physically at risk, for example, driving a car, riding a motorbike, using machinery, boating, etc.?	NO	YES
c	Did you have legal problems more than once because of your drinking, for example, an arrest or disorderly conduct?	NO	YES
d	If your drinking caused problems with your family or other people, did you still keep on drinking?	NO	YES

ARE **1** OR MORE **I3** ANSWERS CODED **YES**?

NO **YES**

ALCOHOL ABUSE
CURRENT

J. SUBSTANCE DEPENDENCE / ABUSE (NON-ALCOHOL)

(➡ MEANS : GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

Now I am going to show you / read to you a list of street drugs or medicines.

			➡	
J1	a	**In the past 12 months**, did you take any of these drugs more than once, to get high, to feel elated, to get "a buzz" or to change your mood?	NO	YES

CIRCLE EACH DRUG TAKEN:

Stimulants: amphetamines, "speed", crystal meth, "crank", "rush", Dexedrine, Ritalin, diet pills.

Cocaine: snorting, IV, freebase, crack, "speedball".

Narcotics: heroin, morphine, Dilaudid, opium, Demerol, methadone, Darvon, codeine, Percodan, Vicoden, OxyContin.

Hallucinogens: LSD ("acid"), mescaline, peyote, psilocybin, STP, "mushrooms", "ecstasy", MDA, MDMA.

Phencyclidine: PCP ("Angel Dust", "PeaCe Pill", "Tranq", "Hog"), or ketamine ("special K").

Inhalants: "glue", ethyl chloride, "rush", nitrous oxide ("laughing gas"), amyl or butyl nitrate ("poppers").

Cannabis: marijuana, hashish ("hash"), THC, "pot", "grass", "weed", "reefer".

Tranquilizers: Quaalude, Seconal ("reds"), Valium, Xanax, Librium, Ativan, Dalmane, Halcion, barbiturates, Miltown, GHB, Roofinol, "Roofies".

Miscellaneous: steroids, nonprescription sleep or diet pills. Cough Medicine? Any others?

SPECIFY THE MOST USED DRUG(S): _____

WHICH DRUG(S) CAUSE THE BIGGEST PROBLEMS?: _____

FIRST EXPLORE THE DRUG CAUSING THE BIGGEST PROBLEMS AND MOST LIKELY TO MEET DEPENDENCE / ABUSE CRITERIA.

IF MEETS CRITERIA FOR ABUSE OR DEPENDENCE, SKIP TO THE NEXT MODULE. OTHERWISE, EXPLORE THE NEXT MOST PROBLEMATIC DRUG.

J2 **Considering your use of (NAME THE DRUG / DRUG CLASS SELECTED), in the past 12 months:**

	a	Have you found that you needed to use much more (NAME OF DRUG / DRUG CLASS SELECTED) to get the same effect that you did when you first started taking it?	NO	YES
	b	When you reduced or stopped using (NAME OF DRUG / DRUG CLASS SELECTED), did you have withdrawal symptoms (aches, shaking, fever, weakness, diarrhea, nausea, sweating, heart pounding, difficulty sleeping, or feeling agitated, anxious, irritable, or depressed)? Did you use any drug(s) to keep yourself from getting sick (withdrawal symptoms) or so that you would feel better?	NO	YES
		IF **YES** TO EITHER, CODE **YES**.		
	c	Have you often found that when you used (NAME OF DRUG / DRUG CLASS SELECTED), you ended up taking more than you thought you would?	NO	YES
	d	Have you tried to reduce or stop taking (NAME OF DRUG / DRUG CLASS SELECTED) but failed?	NO	YES
	e	On the days that you used (NAME OF DRUG / DRUG CLASS SELECTED), did you spend substantial time (>2 HOURS), obtaining, using or in recovering from the drug, or thinking about the drug?	NO	YES
	f	Did you spend less time working, enjoying hobbies, or being with family or friends because of your drug use?	NO	YES
	g	If (NAME OF DRUG / DRUG CLASS SELECTED) caused you health or mental problems, did you still keep on using it?	NO	YES

ARE **3** OR MORE **J2** ANSWERS CODED **YES**?

SPECIFY DRUG(S): _____

***** IF YES, SKIP J3 QUESTIONS, MOVE TO NEXT DISORDER.
"DEPENDENCE PREEMPTS ABUSE" IN DSM IV TR.

NO **YES ***

SUBSTANCE DEPENDENCE
CURRENT

Considering your use of (NAME THE DRUG CLASS SELECTED), in the past 12 months:

J3 a Have you been intoxicated, high, or hungover from (NAME OF DRUG / DRUG CLASS SELECTED) more than once, when you had other responsibilities at school, at work, or at home? Did this cause any problem? NO YES

(CODE **YES** ONLY IF THIS CAUSED PROBLEMS.)

b Have you been high or intoxicated from (NAME OF DRUG / DRUG CLASS SELECTED) more than once in any situation where you were physically at risk (for example, driving a car, riding a motorbike, using machinery, boating, etc.)? NO YES

c Did you have legal problems more than once because of your drug use, for example, an arrest or disorderly conduct? NO YES

d If (NAME OF DRUG / DRUG CLASS SELECTED) caused problems with your family or other people, did you still keep on using it? NO YES

ARE **1** OR MORE **J3** ANSWERS CODED **YES**?

SPECIFY DRUG(S): _____

NO **YES**

SUBSTANCE ABUSE
CURRENT

K. PSYCHOTIC DISORDERS AND MOOD DISORDER WITH PSYCHOTIC FEATURES

ASK FOR AN EXAMPLE OF EACH QUESTION ANSWERED POSITIVELY. CODE **YES** ONLY IF THE EXAMPLES CLEARLY SHOW A DISTORTION OF THOUGHT OR OF PERCEPTION OR IF THEY ARE NOT CULTURALLY APPROPRIATE. BEFORE CODING, INVESTIGATE WHETHER DELUSIONS QUALIFY AS "BIZARRE".

DELUSIONS ARE "BIZARRE" IF: CLEARLY IMPLAUSIBLE, ABSURD, NOT UNDERSTANDABLE, AND CANNOT DERIVE FROM ORDINARY LIFE EXPERIENCE.
HALLUCINATIONS ARE SCORED "BIZARRE" IF: A VOICE COMMENTS ON THE PERSON'S THOUGHTS OR BEHAVIOR, OR WHEN TWO OR MORE VOICES ARE CONVERSING WITH EACH OTHER.
THE PURPOSE OF THIS MODULE IS TO EXCLUDE PATIENTS WITH PSYCHOTIC DISORDERS. THIS MODULE NEEDS EXPERIENCE.

		Now I am going to ask you about unusual experiences that some people have.			BIZARRE
K1	a	Have you ever believed that people were spying on you, or that someone was plotting against you, or trying to hurt you? **NOTE**: ASK FOR EXAMPLES TO RULE OUT ACTUAL STALKING.	NO	YES	YES
	b	**IF YES OR YES BIZARRE:** do you currently believe these things?	NO	YES	YES →**K6**
K2	a	Have you ever believed that someone was reading your mind or could hear your thoughts, or that you could actually read someone's mind or hear what another person was thinking?	NO	YES	YES
	b	**IF YES OR YES BIZARRE:** do you currently believe these things?	NO	YES	YES →**K6**
K3	a	Have you ever believed that someone or some force outside of yourself put thoughts in your mind that were not your own, or made you act in a way that was not your usual self? Have you ever felt that you were possessed? CLINICIAN: ASK FOR EXAMPLES AND DISCOUNT ANY THAT ARE NOT PSYCHOTIC.	NO	YES	YES
	b	**IF YES OR YES BIZARRE:** do you currently believe these things?	NO	YES	YES →**K6**
K4	a	Have you ever believed that you were being sent special messages through the TV, radio, newspapers, books or magazines or that a person you did not personally know was particularly interested in you?	NO	YES	YES
	b	**IF YES OR YES BIZARRE:** do you currently believe these things?	NO	YES	YES →**K6**
K5	a	Have your relatives or friends ever considered any of your beliefs odd or unusual? INTERVIEWER**:** ASK FOR EXAMPLES. ONLY CODE **YES** IF THE EXAMPLES ARE **CLEARLY** DELUSIONAL IDEAS NOT EXPLORED IN QUESTIONS K1 TO K4, FOR EXAMPLE, SOMATIC OR RELIGIOUS DELUSIONS OR DELUSIONS OF GRANDIOSITY, JEALOUSY, GUILT, RUIN OR DESTITUTION, ETC.	NO	YES	YES
	b	**IF YES OR YES BIZARRE:** do they currently consider your beliefs strange?	NO	YES	YES
K6	a	Have you ever heard things other people couldn't hear, such as voices?	NO	YES	
		IF YES TO VOICE HALLUCINATION: Was the voice commenting on your thoughts or behavior or did you hear two or more voices talking to each other?	NO		YES
	b	**IF YES OR YES BIZARRE TO K6a:** have you heard sounds / voices in the past month?	NO	YES	
		IF YES TO VOICE HALLUCINATION: Was the voice commenting on your thoughts or behavior or did you hear two or more voices talking to each other?	NO		YES →**K8b**

K7 a Have you ever had visions when you were awake or have you ever seen things other people couldn't see? NO YES

CLINICIAN: CHECK TO SEE IF THESE ARE CULTURALLY INAPPROPRIATE.

b **IF YES:** have you seen these things in the past month? NO YES

CLINICIAN'S JUDGMENT

K8 b IS THE PATIENT CURRENTLY EXHIBITING INCOHERENCE, DISORGANIZED SPEECH, OR MARKED LOOSENING OF ASSOCIATIONS? NO YES

K9 b IS THE PATIENT CURRENTLY EXHIBITING DISORGANIZED OR CATATONIC BEHAVIOR? NO YES

K10 b ARE NEGATIVE SYMPTOMS OF SCHIZOPHRENIA, E.G. SIGNIFICANT AFFECTIVE FLATTENING, POVERTY OF SPEECH (ALOGIA) OR AN INABILITY TO INITIATE OR PERSIST IN GOAL-DIRECTED ACTIVITIES (AVOLITION), PROMINENT DURING THE INTERVIEW? NO YES

K11 a ARE 1 OR MORE « a » QUESTIONS FROM K1a TO K7a CODED **YES OR YES BIZARRE** AND IS EITHER:

MAJOR DEPRESSIVE EPISODE, (CURRENT, RECURRENT OR PAST)
OR
MANIC OR HYPOMANIC EPISODE, (CURRENT OR PAST) CODED **YES**? NO YES
↳ **K13**

IF NO TO K11 a, CIRCLE NO IN BOTH 'MOOD DISORDER WITH PSYCHOTIC FEATURES' DIAGNOSTIC BOXES AND MOVE TO K13.

b You told me earlier that you had period(s) when you felt (depressed/high/persistently irritable).

Were the beliefs and experiences you just described (SYMPTOMS CODED **YES** FROM **K1**a TO **K7**a) restricted exclusively to times when you were feeling depressed/high/irritable?

IF THE PATIENT EVER HAD A PERIOD OF AT LEAST 2 WEEKS OF HAVING THESE BELIEFS OR EXPERIENCES (PSYCHOTIC SYMPTOMS) WHEN THEY WERE NOT DEPRESSED/HIGH/IRRITABLE, CODE NO TO THIS DISORDER.

IF THE ANSWER IS NO TO THIS DISORDER, ALSO CIRCLE NO TO K12 AND MOVE TO K13

NO **YES**

MOOD DISORDER WITH *PSYCHOTIC FEATURES*

LIFETIME

K12 a ARE 1 OR MORE « b » QUESTIONS FROM K1b TO K7b CODED **YES OR YES BIZARRE** AND IS EITHER:

MAJOR DEPRESSIVE EPISODE, (CURRENT)
OR
MANIC OR HYPOMANIC EPISODE, (CURRENT) CODED **YES**?

IF THE ANSWER IS YES TO THIS DISORDER (LIFETIME OR CURRENT), CIRCLE NO TO K13 AND K14 AND MOVE TO THE NEXT MODULE.

NO **YES**

MOOD DISORDER WITH *PSYCHOTIC FEATURES*

CURRENT

K13 ARE 1 OR MORE « b » QUESTIONS FROM K1b TO K6b, CODED **YES BIZARRE**?

OR

ARE 2 OR MORE « b » QUESTIONS FROM K1b TO K10b, CODED **YES** (RATHER THAN **YES BIZARRE**)?

AND DID AT LEAST TWO OF THE PSYCHOTIC SYMPTOMS OCCUR DURING THE SAME 1 MONTH PERIOD?

NO **YES**

PSYCHOTIC DISORDER
CURRENT

K14 IS **K13** CODED **YES**

OR

ARE 1 OR MORE « a » QUESTIONS FROM K1a TO K6a, CODED **YES BIZARRE**?

OR

ARE 2 OR MORE « a » QUESTIONS FROM K1a TO K7a, CODED **YES** (RATHER THAN **YES BIZARRE**)

AND DID AT LEAST TWO OF THE PSYCHOTIC SYMPTOMS OCCUR DURING THE SAME 1 MONTH PERIOD?

NO **YES**

PSYCHOTIC DISORDER
LIFETIME

L. ANOREXIA NERVOSA

(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

L1	a	How tall are you?	❑ ft ❑❑ in. ❑❑❑ cm.
	b.	What was your lowest weight in the past 3 months?	❑❑❑ lbs. ❑❑❑ kgs.
	c	IS PATIENT'S WEIGHT EQUAL TO OR BELOW THE THRESHOLD CORRESPONDING TO HIS / HER HEIGHT? (SEE TABLE BELOW)	NO YES

In the past 3 months:

L2		In spite of this low weight, have you tried not to gain weight?	NO YES
L3		Have you intensely feared gaining weight or becoming fat, even though you were underweight?	NO YES
L4	a	Have you considered yourself too big / fat or that part of your body was too big / fat?	NO YES
	b	Has your body weight or shape greatly influenced how you felt about yourself?	NO YES
	c	Have you thought that your current low body weight was normal or excessive?	NO YES
L5		ARE 1 OR MORE ITEMS FROM **L4** CODED **YES**?	NO YES
L6		FOR WOMEN ONLY: During the last 3 months, did you miss all your menstrual periods when they were expected to occur (when you were not pregnant)?	NO YES

FOR WOMEN: ARE **L5 AND L6** CODED **YES**?

FOR MEN: IS **L5** CODED **YES**?

NO **YES**

ANOREXIA NERVOSA
CURRENT

HEIGHT / WEIGHT TABLE CORRESPONDING TO A BMI THRESHOLD OF 17.5 KG/M^2

Height/Weight														
ft/in	4'9	4'10	4'11	5'0	5'1	5'2	5'3	5'4	5'5	5'6	5'7	5'8	5'9	5'10
lbs.	81	84	87	89	92	96	99	102	105	108	112	115	118	122
cm	145	147	150	152	155	158	160	163	165	168	170	173	175	178
kgs	37	38	39	41	42	43	45	46	48	49	51	52	54	55

Height/Weight					
ft/in	5'11	6'0	6'1	6'2	6'3
lbs.	125	129	132	136	140
cm	180	183	185	188	191
kgs	57	59	60	62	64

The weight thresholds above are calculated using a body mass index (BMI) equal to or below 17.5 kg/m^2 for the patient's height. This is the threshold guideline below which a person is deemed underweight by the DSM-IV and the ICD-10 Diagnostic Criteria for Research for Anorexia Nervosa.

M. BULIMIA NERVOSA

(➡ MEANS : GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

M1	In the past three months, did you have eating binges or times when you ate a very large amount of food within a 2-hour period?	➡ NO	YES
M2	In the last 3 months, did you have eating binges as often as twice a week?	➡ NO	YES
M3	During these binges, did you feel that your eating was out of control?	➡ NO	YES
M4	Did you do anything to compensate for, or to prevent a weight gain from these binges, like vomiting, fasting, exercising or taking laxatives, enemas, diuretics (fluid pills), or other medications?	➡ NO	YES
M5	Does your body weight or shape greatly influence how you feel about yourself?	➡ NO	YES
M6	DO THE PATIENT'S SYMPTOMS MEET CRITERIA FOR ANOREXIA NERVOSA?	NO	YES ↓ Skip to M8
M7	Do these binges occur only when you are under (____lbs./kgs.)? INTERVIEWER: WRITE IN THE ABOVE PARENTHESIS THE THRESHOLD WEIGHT FOR THIS PATIENT'S HEIGHT FROM THE HEIGHT / WEIGHT TABLE IN THE ANOREXIA NERVOSA MODULE.	NO	YES

M8 IS **M5** CODED **YES** AND IS EITHER **M6** OR **M7** CODED **NO**?

NO **YES**

BULIMIA NERVOSA
CURRENT

IS **M7** CODED **YES**?

NO **YES**

ANOREXIA NERVOSA
Binge Eating/Purging Type
CURRENT

N. GENERALIZED ANXIETY DISORDER

(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

N1	a	Were you excessively anxious or worried about several routine things, over the past 6 months? IN ENGLISH, IF THE PATIENT IS UNCLEAR ABOUT WHAT YOU MEAN, PROBE BY ASKING (Do others think that you are a "worry wart") AND GET EXAMPLES.	➡ NO	YES
	b	Are these anxieties and worries present most days?	➡ NO	YES
		ARE THE PATIENT'S ANXIETY AND WORRIES RESTRICTED EXCLUSIVELY TO, OR BETTER EXPLAINED BY, ANY DISORDER PRIOR TO THIS POINT?	NO	➡ YES
N2		Do you find it difficult to control the worries?	➡ NO	YES
N3		FOR THE FOLLOWING, CODE **NO** IF THE SYMPTOMS ARE CONFINED TO FEATURES OF ANY DISORDER EXPLORED PRIOR TO THIS POINT**.**		
		When you were anxious over the past 6 months, did you, most of the time:		
	a	Feel restless, keyed up or on edge?	NO	YES
	b	Have muscle tension?	NO	YES
	c	Feel tired, weak or exhausted easily?	NO	YES
	d	Have difficulty concentrating or find your mind going blank?	NO	YES
	e	Feel irritable?	NO	YES
	f	Have difficulty sleeping (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively)?	NO	YES
		ARE **3** OR MORE **N3** ANSWERS CODED **YES?**	➡ NO	YES
N4		Do these anxieties and worries disrupt your normal work, school or social functioning or cause you significant distress?	**NO**	**YES**

GENERALIZED ANXIETY DISORDER
CURRENT

O. RULE OUT MEDICAL, ORGANIC OR DRUG CAUSES FOR ALL DISORDERS

IF THE PATIENT CODES POSITIVE FOR ANY CURRENT DISORDER ASK:

Just before these symptoms began:

O1a	Were you taking any drugs or medicines?	❒ No	❒ Yes	❒ Uncertain
O1b	Did you have any medical illness?	❒ No	❒ Yes	❒ Uncertain

IN THE CLINICIAN'S JUDGMENT: ARE EITHER OF THESE LIKELY TO BE DIRECT CAUSES OF THE PATIENT'S DISORDER?
IF NECESSARY ASK ADDITIONAL OPEN-ENDED QUESTIONS.

O2	**SUMMARY**: HAS AN ORGANIC CAUSE BEEN RULED OUT?	❒ No	❒ Yes	❒ Uncertain

P. ANTISOCIAL PERSONALITY DISORDER

(➡ MEANS : GO TO THE DIAGNOSTIC BOX AND CIRCLE NO)

P1 **Before you were 15 years old, did you:**

a	repeatedly skip school or run away from home overnight?	NO	YES
b	repeatedly lie, cheat, "con" others, or steal?	NO	YES
c	start fights or bully, threaten, or intimidate others?	NO	YES
d	deliberately destroy things or start fires?	NO	YES
e	deliberately hurt animals or people?	NO	YES
f	force someone to have sex with you?	NO	YES

➡

ARE **2** OR MORE **P1** ANSWERS CODED **YES**? NO YES

DO NOT CODE **YES** TO THE BEHAVIORS BELOW IF THEY ARE EXCLUSIVELY POLITICALLY OR RELIGIOUSLY MOTIVATED**.**

P2 **Since you were 15 years old, have you:**

a	repeatedly behaved in a way that others would consider irresponsible, like failing to pay for things you owed, deliberately being impulsive or deliberately not working to support yourself?	NO	YES
b	done things that are illegal even if you didn't get caught (for example, destroying property, shoplifting, stealing, selling drugs, or committing a felony)?	NO	YES
c	been in physical fights repeatedly (including physical fights with your spouse or children)?	NO	YES
d	often lied or "conned" other people to get money or pleasure, or lied just for fun?	NO	YES
e	exposed others to danger without caring?	NO	YES
f	felt no guilt after hurting, mistreating, lying to, or stealing from others, or after damaging property?	NO	YES

ARE **3** OR MORE **P2** QUESTIONS CODED **YES**?

NO **YES**

ANTISOCIAL PERSONALITY DISORDER
LIFETIME

THIS CONCLUDES THE INTERVIEW

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Scientific committee for the MINI 6.0.0:

A. Carlo Altamura, Milano, Italy
Cyril Hoschl, Praha, Czech Republic
George Papadimitriou, Athens, Greece
Hans Ågren, Göteborg, Sweden
Hans-Jürgen Möller, München, Germany
Hans-Ulrich Wittchen, Dresden, Germany
István Bitter, Budapest, Hungary
Jean-Pierre Lépine, Paris, France
Jules Angst, Zurich, Switzerland
Julio Bobes, Oviedo, Spain
Luciano Conti, Pisa, Italy
Marelli Colon-Soto MD, Puerto Rico, United States
Michael Van Ameringen MD, Toronto, Canada
Rosario Hidalgo MD, Tampa, United States
Siegfried Kasper, Vienna, Austria
Thomas Schlaepfer, Bonn, Germany

Translations	**M.I.N.I. 4.4 or earlier versions**	**M.I.N.I. 4.6/5.0, M.I.N.I. Plus 4.6/5.0 and M.I.N.I. Screen 5.0:**
Afrikaans	R. Emsley, W. Maartens	
Arabic		O. Osman, E. Al-Radi
Bengali		H. Banerjee, A. Banerjee
Braille (English)		
Brazilian Portuguese	P. Amorim	P. Amorim
Bulgarian	L.G. Hranov	
Chinese		L. Carroll, Y-J. Lee, Y-S. Chen, C-C. Chen, C-Y. Liu, C-K. Wu, H-S. Tang, K-D. Juang, Yan-Ping Zheng.
Czech		P. Svlosky
Danish	P. Bech	P. Bech, T. Schütze
Dutch/Flemish	E. Griez, K. Shruers, T. Overbeek, K. Demyttenaere	I. Van Vliet, H. Leroy, H. van Megen
English	D. Sheehan, J. Janavs, R. Baker, K. Harnett-Sheehan, E. Knapp, M. Sheehan	D. Sheehan, R. Baker, J. Janavs, K. Harnett-Sheehan, M. Sheehan
Estonian		J. Shlik, A. Aluoja, E. Khil
Farsi/Persian		K. Khooshabi, A. Zomorodi
Finnish	M. Heikkinen, M. Lijeström, O. Tuominen	M. Heikkinen, M. Lijeström, O. Tuominen
French	Y. Lecrubier, E. Weiller, I. Bonora, P. Amorim, J.P. Lepine	Y. Lecrubier, E. Weiller, P. Amorim, T. Hergueta
German	I. v. Denffer, M. Ackenheil, R. Dietz-Bauer	G. Stotz, R. Dietz-Bauer, M. Ackenheil
Greek	S. Beratis	T. Calligas, S. Beratis, GN Papidimitriou, T Matsoukas CR Soldatos
Gujarati		M. Patel, B. Patel, Organon
Hebrew	J. Zohar, Y. Sasson	R. Barda, I. Levinson, A. Aviv
Hindi		C. Mittal, K. Batra, S. Gambhir, Organon
Hungarian	I. Bitter, J. Balazs	I. Bitter, J. Balazs
Icelandic		J.G. Stefansson
Italian	I. Bonora, L. Conti, M. Piccinelli, M. Tansella, G. Cassano, Y. Lecrubier, P. Donda, E. Weiller	L. Conti, A. Rossi, P. Donda
Japanese		T. Otsubo, H. Watanabe, H. Miyaoka, K. Kamijima, J.Shinoda, K.Tanaka, Y. Okajima

Kannada		Organon
Korean		K.S. Oh and Korean Academy of Anxiety Disorders
Latvian	V. Janavs, J. Janavs, I. Nagobads	V. Janavs, J. Janavs
Lithuanian		A. Bacevicius
Luganda		WW. Muhweziosal, H. Agren
Malayalam		Organon
Marathi		Organon
Norwegian	G. Pedersen, S. Blomhoff	K.A. Leiknes , U. Malt, E. Malt, S. Leganger
Polish	M. Masiak, E. Jasiak	M. Masiak, E. Jasiak
Portuguese	P. Amorim	P. Amorim, T. Guterres
Punjabi		A. Gahunia, S. Gambhir
Romanian		O. Driga
Russian		A. Bystritsky, E. Selivra, M. Bystritsky, L. Shumyak, M. Klisinska.
Serbian	I. Timotijevic	I. Timotijevic
Setswana	K. Ketlogetswe	
Slovenian	M. Kocmur	
Spanish	L. Ferrando, J. Bobes-Garcia, J. Gilbert-Rahola, Y. Lecrubier	L. Ferrando, L. Franco-Alfonso, M. Soto, J. Bobes-Garcia, O. Soto, L. Franco, G. Heinze, C. Santana, R. Hidalgo
Swedish	M. Waern, S. Andersch, M. Humble	C. Allgulander, H. Agren M. Waern, A. Brimse, M. Humble.
Tamil		Organon
Telugu		Organon
Thai		P. Kittirattanapaiboon, S. Mahatnirunkul, P. Udomrat, P. Silpakit,, M. Khamwongpin, S. Srikosai.
Turkish	T. Örnek, A. Keskiner, I. Vahip	T. Örnek, A. Keskiner, A.Engeler
Urdu		S. Gambhir
Yiddish		J. Goldman, Chana Pollack, Myrna Mniewski

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MOOD DISORDERS: DIAGNOSTIC ALGORITHM

Consult Modules:
- A Major Depressive Episode
- C (Hypo) manic Episode
- K Psychotic Disorders

MODULE K:

1a	IS **K11b** CODED YES?	NO	YES
1b	IS **K12a** CODED YES?	NO	YES

MODULES A and C:		Current	Past
2 a	CIRCLE YES IF A DELUSIONAL IDEA IS IDENTIFIED IN **A3e**?	YES	YES
b	CIRCLE YES IF A DELUSIONAL IDEA IS IDENTIFIED IN **C3a**?	YES	YES

c Is a Major Depressive Episode coded YES (current or past)?
and
is Manic Episode coded NO (current and past)?
and
is Hypomanic Episode coded NO (current and past)?
and
is **"**Hypomanic Symptoms" coded NO (current and past)?

Specify:
- If the depressive episode is **current** or **past** or both
- **With Psychotic Features** Current: If 1b or 2a (current) = YES
  With Psychotic Features Past: If 1a or 2a (past) = YES

MAJOR DEPRESSIVE DISORDER

	current	past
MDD	❑	❑

With Psychotic Features

Current	❑
Past	❑

d Is a Manic Episode coded YES (current or past)?

Specify:
- If the Bipolar I Disorder is **current** or **past** or both
- With **Single Manic Episode**: If Manic episode (current or past) = YES
  and MDE (current and past) = NO
- **With Psychotic Features** Current: If 1b or 2a (current) or 2b (current) = YES
  With Psychotic Features Past: If 1a or 2a (past) or 2b (past) = YES
- If the **most recent episode** is manic, depressed,
  mixed or hypomanic or unspecified (all mutually exclusive)
- **Unspecified** if the Past Manic Episode is coded YES AND
  Current (C3 Summary AND C4a AND C6 AND O2) are coded YES

BIPOLAR I DISORDER

	current	past
Bipolar I Disorder	❑	❑
Single Manic Episode	❑	❑

With Psychotic Features

Current	❑
Past	❑

Most Recent Episode

Manic	❑
Depressed	❑
Mixed	❑
Hypomanic	❑
Unspecified	❑

e Is Major Depressive Episode coded YES (current or past)?
and
Is Hypomanic Episode coded YES (current or past)?
and
Is Manic Episode coded NO (current and past)?

Specify:

- If the Bipolar Disorder is **current** or **past** or both
- If the most recent mood episode is **hypomanic** or **depressed** (mutually exclusive)

BIPOLAR II DISORDER

	current	past
Bipolar II Disorder	❑	❑

Most Recent Episode

Hypomanic	❑
Depressed	❑

f Is MDE coded NO (current and past)
and
Is Manic Episode coded NO (current and past)?
and is either:

1) C7b coded YES for the appropriate time frame?

or

2) C3 Summary coded YES for the appropriate time frame?
and
C4a coded YES for the appropriate time frame?
and
C7c coded YES for the appropriate time frame?

Specify if the Bipolar Disorder NOS is **current** or **past** or both

BIPOLAR DISORDER NOS

	current	past
Bipolar Disorder NOS	❑	❑

M.I.N.I. PLUS

The shaded modules below are additional modules available in the MINI PLUS beyond what is available in the standard MINI. The un-shaded modules below are in the standard MINI.

These MINI PLUS modules can be inserted into or used in place of the standard MINI modules, as dictated by the specific needs of any study.

	MODULES	TIME FRAME
A	MAJOR DEPRESSIVE EPISODE	Current (2 weeks) Past Recurrent
	MOOD DISORDER DUE TO A GENERAL MEDICAL CONDITION	Current Past
	SUBSTANCE INDUCED MOOD DISORDER	Current Past
	MDE WITH MELANCHOLIC FEATURES	Current (2 weeks)
	MDE WITH ATYPICAL FEATURES	Current (2 weeks)
	MDE WITH CATATONIC FEATURES	Current (2 weeks)
B	DYSTHYMIA	Current (Past 2 years) Past
C	SUICIDALITY	Current (Past Month) Risk: ❑ Low ❑ Medium ❑ High
D	MANIC EPISODE	Current Past
	HYPOMANIC EPISODE	Current Past
	BIPOLAR I DISORDER	Current Past
	BIPOLAR II DISORDER	Current Past
	BIPOLAR DISORDER NOS	Current Past
	MANIC EPISODE DUE TO A GENERAL MEDICAL CONDITION	Current Past
	HYPOMANIC EPISODE DUE TO A GENERAL MEDICAL CONDITION	Current Past
	SUBSTANCE INDUCED MANIC EPISODE	Current Past
	SUBSTANCE INDUCED HYPOMANIC EPISODE	Current Past
E	PANIC DISORDER	Current (Past Month) Lifetime
	ANXIETY DISORDER WITH PANIC ATTACKS DUE TO A GENERAL MEDICAL CONDITION	Current
	SUBSTANCE INDUCED ANXIETY DISORDER WITH PANIC ATTACKS	Current
F	AGORAPHOBIA	Current
G	SOCIAL PHOBIA (Social Anxiety Disorder)	Current (Past Month)
H	SPECIFIC PHOBIA	Current
I	OBSESSIVE-COMPULSIVE DISORDER	Current (Past Month)
	OCD DUE TO A GENERAL MEDICAL CONDITION	Current
	SUBSTANCE INDUCED OCD	Current
J	POSTTRAUMATIC STRESS DISORDER	Current (Past Month)
K	ALCOHOL DEPENDENCE	Past 12 Months
	ALCOHOL DEPENDENCE	Lifetime
	ALCOHOL ABUSE	Past 12 Months
	ALCOHOL ABUSE	Lifetime
L	SUBSTANCE DEPENDENCE (Non-alcohol)	Past 12 Months
	SUBSTANCE DEPENDENCE (Non-alcohol)	Lifetime
	SUBSTANCE ABUSE (Non-alcohol)	Past 12 Months

M	PSYCHOTIC DISORDERS	Lifetime
		Current
	MOOD DISORDER WITH PSYCHOTIC FEATURES	Current
	SCHIZOPHRENIA	Current
		Lifetime
	SCHIZOAFFECTIVE DISORDER	Current
		Lifetime
	SCHIZOPHRENIFORM DISORDER	Current
		Lifetime
	BRIEF PSYCHOTIC DISORDER	Current
		Lifetime
	DELUSIONAL DISORDER	Current
		Lifetime
	PSYCHOTIC DISORDER DUE TO A GENERAL MEDICAL CONDITION	Current
		Lifetime
	SUBSTANCE INDUCED PSYCHOTIC DISORDER	Current
		Lifetime
	PSYCHOTIC DISORDER NOS	Current
		Lifetime
	MOOD DISORDER WITH PSYCHOTIC FEATURES	Lifetime
	MOOD DISORDER NOS	Lifetime
	MAJOR DEPRESSIVE DISORDER WITH PSYCHOTIC FEATURES	Current
		Past
	BIPOLAR I DISORDER WITH PSYCHOTIC FEATURES	Current
		Past
N	ANOREXIA NERVOSA	Current (Past 3 Months)
O	BULIMIA NERVOSA	Current (Past 3 Months)
	BULIMIA NERVOSA PURGING TYPE	Current
	BULIMIA NERVOSA NONPURGING TYPE	Current
	ANOREXIA NERVOSA, BINGE EATING/PURGING TYPE	Current
	ANOREXIA NERVOSA, RESTRICTING TYPE	Current
P	GENERALIZED ANXIETY DISORDER	Current (Past 6 Months)
	GENERALIZED ANXIETY DISORDER DUE TO A GENERAL MEDICAL CONDITION	Current
	SUBSTANCE INDUCED GAD	Current
Q	ANTISOCIAL PERSONALITY DISORDER	Lifetime
R	SOMATIZATION DISORDER	Lifetime
		Current
S	HYPOCHONDRIASIS	Current
T	BODY DYSMORPHIC DISORDER	Current
U	PAIN DISORDER	Current
V	CONDUCT DISORDER	Past 12 Months
W	ATTENTION DEFICIT/HYPERACTIVITY DISORDER (Children/Adolescents)	Past 6 Months
	ATTENTION DEFICIT/HYPERACTIVITY DISORDER (Adults)	Lifetime
		Current
X	ADJUSTMENT DISORDERS	Current
Y	PREMENSTRUAL DYSPHORIC DISORDER	Current
Z	MIXED ANXIETY-DEPRESSIVE DISORDER	Current

BRIGHT LIGHT

10-20 PSG electrode attachments

Subject ID: _____ Date: _____

	Measure	cm	Electrode	Distance	cm	Completed
1	Nasion to Inion		**CZ**	midpoint		
			FP	10% from nasion		
			OZ	10% from inion		
2	Preaurical to preaurical		**CZ**	midpoint		
			C3 & C4	20% from midpoint		
3	Head Circumference (through FP and OZ)		**FP1 & FP2**	5% to each side of FP		
			O1 & O2	5% to each side of OZ		
4	FP1 to C3		**F3**	50% from C3		
5	FP2 to C4		**F4**	50% from C4		
6	Reference		**A1 & A2**			
7	Chins (EMG)		**EMG1 & EMG2**			

Bio Calibrations

	Instruction	Code	Duration	MSLT 1 Completed	MSLT 2 Completed	MSLT 3 Completed
1	Rest with eyes open	EO	1 min (2 epochs)			
2	Rest with eyes closed	EC	1 min (2 epochs)			
3	Look up and down	U/D	30 sec (1 epoch)			
4	Look left and right	L/R	30 sec (1 epoch)			
5	Blink 5 times	Blink	5 blinks (1 epoch)			
6	Grit teeth	Teeth	30 sec (1 epoch)			

	MSLT 1	MSLT 2	MSLT 3
Lights out epoch			
Wake time epoch			

Appendix II: Symptom Checklist Included in VA's National Traumatic Brain Injury Evaluation and Treatment Protocol

NEUROBEHAVIORAL SYMPTOM INVENTORY

Please rate the following symptoms with regard to how much they have disturbed you *SINCE YOUR INJURY*.

0 = None- Rarely if ever present; not a problem at all

1 = Mild- Occasionally present, but it does not disrupt activities; I can usually continue what I'm doing; doesn't really concern me.

2 = Moderate- Often present, occasionally disrupts my activities; I can usually continue what I'm doing with some effort; I feel somewhat concerned.

3 = Severe- Frequently present and disrupts activities; I can only do things that are fairly simple or take little effort; I feel like I need help.

4 = Very Severe- Almost always present and I have been unable to perform at work, school or home due to this problem; I probably cannot function without help.

1. Feeling dizzy:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

2. Loss of balance:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

3. Poor coordination, clumsy:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

4. Headaches:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

5. Nausea:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

6. Vision problems, blurring, trouble seeing:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

7. Sensitivity to light

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

8. Hearing difficulty:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

9. Sensitivity to noise:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

10. Numbness or tingling on parts of my body:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

11. Change in taste and/or smell:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

12. Loss of appetite or increase appetite:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

13. Poor concentration, can't pay attention, easily distracted:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

14. Forgetfulness, can't remember things:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

15. Difficulty making decisions:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

16. Slowed thinking, difficulty getting organized, can't finish things:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

17. Fatigue, loss of energy, getting tired easily:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

18. Difficulty falling or staying asleep:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

19. Feeling anxious or tense:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

20. Feeling depressed or sad:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

21. Irritability, easily annoyed:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

22. Poor frustration tolerance, feeling easily overwhelmed by things:

0	1	2	3	4
NONE	MILD	MODERATE	SEVERE	VERY SEVERE

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME:_____ DATE:_____

Over the last *2 weeks,* how often have you been bothered by any of the following problems?
(use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so figety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3
add columns		+	+	

(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card). TOTAL:

10. If you checked off *any problems,* how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?

- Not difficult at all _____
- Somewhat difficult _____
- Very difficult _____
- Extremely difficult _____

A2663B 10-04-2005

Session (1 or 2)_____ID#_____Date_____Time_____AM PM

PITTSBURGH SLEEP QUALITY INDEX

INSTRUCTIONS:
The following questions relate to your usual sleep habits during the past month only. Your answers should indicate the most accurate reply for the majority of days and nights in the past month. Please answer all questions.

1. During the past month, what time have you usually gone to bed at night?

   BED TIME _____

2. During the past month, how long (in minutes) has it usually taken you to fall asleep each night?

   NUMBER OF MINUTES _____

3. During the past month, what time have you usually gotten up in the morning?

   GETTING UP TIME _____

4. During the past month, how many hours of actual sleep did you get at night? (This may be different than the number of hours you spent in bed.)

   HOURS OF SLEEP PER NIGHT _____

For each of the remaining questions, check the one best response. Please answer all questions.

5. During the past month, how often have you had trouble sleeping because you . . .

a) Cannot get to sleep within 30 minutes

Not during the past month_____	Less than once a week_____	Once or twice a week_____	Three or more times a week_____

b) Wake up in the middle of the night or early morning

Not during the past month_____	Less than once a week_____	Once or twice a week_____	Three or more times a week_____

c) Have to get up to use the bathroom

Not during the past month_____	Less than once a week_____	Once or twice a week_____	Three or more times a week_____

d) Cannot breathe comfortably

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____

e) Cough or snore loudly

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____

f) Feel too cold

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____

g) Feel too hot

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____

h) Had bad dreams

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____

i) Have pain

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____

j) Other reason(s), please describe_____

_____

How often during the past month have you had trouble sleeping because of this?

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____

6. During the past month, how would you rate your sleep quality overall?

Very good _____

Fairly good _____

Fairly bad _____

Very bad _____

7. During the past month, how often have you taken medicine to help you sleep (prescribed or "over the counter")?

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____

8. During the past month, how often have you had trouble staying awake while driving, eating meals, or engaging in social activity?

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____

9. During the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done?

No problem at all _____

Only a very slight problem _____

Somewhat of a problem _____

A very big problem _____

10. Do you have a bed partner or room mate?

No bed partner or room mate _____

Partner/room mate in other room _____

Partner in same room, but not same bed _____

Partner in same bed _____

If you have a room mate or bed partner, ask him/her how often in the past month you have had . . .

a) Loud snoring

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____

b) Long pauses between breaths while asleep

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____

c) Legs twitching or jerking while you sleep

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____

d) Episodes of disorientation or confusion during sleep

Not during the past month_____	Less than once a week_____	Once or twice a week_____	Three or more times a week_____

e) Other restlessness while you sleep; please describe_____

_____

Not during the past month_____	Less than once a week_____	Once or twice a week_____	Three or more times a week_____

Buysse DJ, Reynolds CF, Monk TH, Berman SR, Kupfer DJ: Psychiatry Research, 28:193-213, 1989.


RBANS
Repeatable Battery for the Assessment of Neuropsychological Status
Manual
Christopher Randolph
RBANS
Stimulus Booklet A
Christopher Randolph
RBANS
Coding Scoring Template
Record Form A

Rivermead Post Concussion Symptoms Questionnaire

Modified (Rpq-3 And Rpq-13)[42] Printed With Permission: Modified Scoring System From Eyres 2005 [28]

Name: Date:

After a head injury or accident some people experience symptoms that can cause worry or nuisance. We would like to know if you now suffer any of the symptoms given below. Because many of these symptoms occur normally, we would like you to compare yourself now with before the accident. For each symptom listed below please circle the number that most closely represents your answer.

0 = not experienced at all
1 = no more of a problem
2 = a mild problem
3 = a moderate problem
4 = a severe problem

Compared with **before** the accident, do you **now** (i.e., over the last 24 hours) suffer from:

	not experienced	no more of a problem	mild problem	moderate problem	severe problem
Headaches	0	1	2	3	4
Feelings of dizziness	0	1	2	3	4
Nausea and/or vomiting	0	1	2	3	4
Noise sensitivity (easily upset by loud noise)	0	1	2	3	4
Sleep disturbance	0	1	2	3	4
Fatigue, tiring more easily	0	1	2	3	4
Being irritable, easily angered	0	1	2	3	4
Feeling depressed or tearful	0	1	2	3	4
Feeling frustrated or impatient	0	1	2	3	4
Forgetfulness, poor memory	0	1	2	3	4
Poor concentration	0	1	2	3	4
Taking longer to think	0	1	2	3	4
Blurred vision	0	1	2	3	4
Light sensitivity (easily upset by bright light)	0	1	2	3	4
Double vision	0	1	2	3	4
Restlessness	0	1	2	3	4
Are you experiencing any other difficulties? Please specify, and rate as above.					
1.	0	1	2	3	4
2.	0	1	2	3	4

Administration only:

RPQ-3 *(total for first three items)*	
RPQ-13 *(total for next 13 items)*	

http://www.maa.nsw.gov.au/default.aspx?MenuID=148

Subject Number: _____ Date:_____

In a typical week, we would like to know how much and when you are using your TV and Computer. Please place a C (computer) and/or T (television) in each hour time slot to indicate use.

Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12AM							
1AM							
2AM							
3AM							
4AM							
5AM							
6AM							
7AM							
8AM							
9AM							
10AM							
11AM							
12PM							
1PM							
2PM							
3PM							
4PM							
5PM							
6PM							
7PM							
8PM							
9PM							
10PM							
11PM							

Daily Sleep Diary

Use this sleep diary **every day** to help you track the quantity and quality of your sleep. Reflecting on the previous day, please fill out this diary during your exposure to the lightbox. If you have any questions or concerns, please call **(617)-** 855-2239.

Date: **Light box start time:**

Bed time last night _____:_____ ☐AM ☐PM

Wake time this morning ______:______ ☐AM ☐PM

It took me _______ (hr) ______ (min) to fall asleep

I woke up ________ times during the night

I took a nap from _____:____ to _____:______. ☐**N/A**

Number of caffeinated beverages: ________

I woke up this morning feeling

☐ refreshed

☐ somewhat refreshed

☐ fatigued

I consumed caffeine yesterday:

☐ morning ☐ afternoon ☐ evening

Most of the day yesterday, I felt:
Very sleepy 1 2 3 4 5 6 7 Very alert

Yesterday my mood was:
Very poor 1 2 3 4 5 6 7 Very good

Yesterday I had problems with headache pain:
Not at all 1 2 3 4 5 6 7 Very severe

Yesterday I ate more than I intended to:
Disagree 1 2 3 4 5 6 7 Agree

Date: **Light box start time:**

Bed time last night _____:_____ ☐AM ☐PM

Wake time this morning ______:______ ☐AM ☐PM

It took me _______ (hr) ______ (min) to fall asleep

I woke up ________ times during the night

I took a nap from _____:____ to _____:______. ☐**N/A**

Number of caffeinated beverages: ________

I woke up this morning feeling

☐ refreshed

☐ somewhat refreshed

☐ fatigued

I consumed caffeine yesterday

☐ morning ☐ afternoon ☐ evening

Most of the day yesterday, I felt:
Very sleepy 1 2 3 4 5 6 7 Very alert

Yesterday my mood was:
Very poor 1 2 3 4 5 6 7 Very good

Yesterday I had problems with headache pain:
Not at all 1 2 3 4 5 6 7 Very severe

Yesterday I ate more than I intended to:
Disagree 1 2 3 4 5 6 7 Agree

Date: **Light box start time:**

Bed time last night _____:_____ ☐AM ☐PM

Wake time this morning ______:______ ☐AM ☐PM

It took me _______ (hr) ______ (min) to fall asleep

I woke up ________ times during the night

I took a nap from _____:____ to _____:______. ☐**N/A**

Number of caffeinated beverages: ________

I woke up this morning feeling

☐ refreshed

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I consumed caffeine yesterday

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Most of the day yesterday, I felt:
Very sleepy 1 2 3 4 5 6 7 Very alert

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Not at all 1 2 3 4 5 6 7 Very severe

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I took a nap from _____:____ to _____:______. ☐**N/A**

Number of caffeinated beverages: __________

I woke up this morning feeling

☐ refreshed

☐ somewhat refreshed

☐ fatigued

I consumed caffeine yesterday

☐ morning ☐ afternoon ☐ evening

Most of the day yesterday, I felt:
Very sleepy 1 2 3 4 5 6 7 Very alert

Yesterday my mood was:
Very poor 1 2 3 4 5 6 7 Very good

Yesterday I had problems with headache pain:
Not at all 1 2 3 4 5 6 7 Very severe

Yesterday I ate more than I intended to:
Disagree 1 2 3 4 5 6 7 Agree

Date:	Light box start time:
Bed time last night _____:_____ ☐AM ☐PM	I woke up this morning feeling
Wake time this morning ______:______ ☐AM ☐PM	☐refreshed
It took me _______ (hr) ______ (min) to fall asleep	☐somewhat refreshed
I woke up ________ times during the night	☐fatigued
I took a nap from _____:____ to _____:______. ☐ **N/A**	I consumed caffeine yesterday
Number of caffeinated beverages: ________	☐morning ☐afternoon ☐evening
Most of the day yesterday, I felt: Very sleepy 1 2 3 4 5 6 7 Very alert	Yesterday my mood was: Very poor 1 2 3 4 5 6 7 Very good
Yesterday I had problems with headache pain: Not at all 1 2 3 4 5 6 7 Very severe	Yesterday I ate more than I intended to: Disagree 1 2 3 4 5 6 7 Agree

Date:	Light box start time:
Bed time last night _____:_____ ☐AM ☐PM	I woke up this morning feeling
Wake time this morning ______:______ ☐AM ☐PM	☐ refreshed
It took me _______ (hr) ______ (min) to fall asleep	☐ somewhat refreshed
I woke up ________ times during the night	☐ fatigued
I took a nap from _____:____ to _____:______. ☐ **N/A**	I consumed caffeine yesterday
Number of caffeinated beverages: _________	☐ morning ☐afternoon ☐evening
Most of the day yesterday, I felt: Very sleepy 1 2 3 4 5 6 7 Very alert	Yesterday my mood was: Very poor 1 2 3 4 5 6 7 Very good
Yesterday I had problems with headache pain: Not at all 1 2 3 4 5 6 7 Very severe	Yesterday I ate more than I intended to: Disagree 1 2 3 4 5 6 7 Agree

Date:	Light box start time:
Bed time last night _____:_____ ☐AM ☐PM	I woke up this morning feeling
Wake time this morning ______:______ ☐AM ☐PM	☐ refreshed
It took me _______ (hr) ______ (min) to fall asleep	☐ somewhat refreshed
I woke up ________ times during the night	☐ fatigued
I took a nap from _____:____ to _____:______. ☐ **N/A**	I consumed caffeine yesterday
Number of caffeinated beverages: _________	☐ morning ☐ afternoon ☐evening
Most of the day yesterday, I felt: Very sleepy 1 2 3 4 5 6 7 Very alert	Yesterday my mood was: Very poor 1 2 3 4 5 6 7 Very good
Yesterday I had problems with headache pain: Not at all 1 2 3 4 5 6 7 Very severe	Yesterday I ate more than I intended to: Disagree 1 2 3 4 5 6 7 Agree

Date:	Light box start time:
Bed time last night _____:_____ ☐AM ☐PM	I woke up this morning feeling
Wake time this morning ______:______ ☐AM ☐PM	☐refreshed
It took me _______ (hr) ______ (min) to fall asleep	☐somewhat refreshed
I woke up ________ times during the night	☐fatigued
I took a nap from _____:____ to _____:______. ☐**N/A**	I consumed caffeine yesterday
Number of caffeinated beverages: _________	☐ morning ☐afternoon ☐evening
Most of the day yesterday, I felt: Very sleepy 1 2 3 4 5 6 7 Very alert	Yesterday my mood was: Very poor 1 2 3 4 5 6 7 Very good
Yesterday I had problems with headache pain: Not at all 1 2 3 4 5 6 7 Very severe	Yesterday I ate more than I intended to: Disagree 1 2 3 4 5 6 7 Agree

Name:_____ Date:_____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now, THAT IS, at this moment.

There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	Not at all	Somewhat	Moderately so	Very much so
1. I feel calm.	1	2	3	4
2. I feel secure.	1	2	3	4
3. I am tense	1	2	3	4
4. I feel regretful	1	2	3	4
5. I feel at ease	1	2	3	4
6. I feel upset	1	2	3	4
7. I am presently worrying over possible misfortunes.	1	2	3	4
8. I feel rested.	1	2	3	4
9. I feel anxious	1	2	3	4
10. I feel comfortable	1	2	3	4
11. I feel self-confident.	1	2	3	4
12. I feel nervous	1	2	3	4
13. I am jittery	1	2	3	4
14. I feel "high strung"	1	2	3	4
15. I am relaxed	1	2	3	4
16. I feel content	1	2	3	4
17. I am worried	1	2	3	4
18. I feel over-excited and "rattled".	1	2	3	4
19. I feel joyful.	1	2	3	4
20. I feel pleasant.	1	2	3	4

STAI Form T

NAME_____ DATE_____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you generally feel.

There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	Almost never	Sometimes	Often	Almost always
21. I feel pleasant	1	2	3	4
22. I tire quickly	1	2	3	4
23. I feel like crying	1	2	3	4
24. I wish I could be as happy as others seem to be	1	2	3	4
25. I am losing out on things because I can't make up my mind soon enough	1	2	3	4
26. I feel rested	1	2	3	4
27. I am "calm, cool, and collected"	1	2	3	4
28. I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
29. I worry too much over something that really doesn't matter	1	2	3	4
30. I am happy	1	2	3	4
31. I am inclined to take things hard	1	2	3	4
32. I lack self-confidence	1	2	3	4
33. I feel secure	1	2	3	4
34. I try to avoid facing a crises or difficulty	1	2	3	4
35. I feel blue	1	2	3	4
36. I am content	1	2	3	4
37. Some unimportant thought runs through my mind and bothers me	1	2	3	4
38. I take disappointments so keenly that I can't put them out of my mind	1	2	3	4
39. I am a steady person	1	2	3	4
40. I get in a state of tension or turmoil as I think over my recent concerns and interests	1	2	3	4

Subject Number_____ Date_____

Please put an **X** next to the statement that best describes how you feel:

Right now I am:

- ☐ Feeling active, vital, alert or wide awake
- ☐ Functioning at high levels, but not at peak; able to concentrate
- ☐ Awake, but relaxed; responsive but not fully alert
- ☐ Somewhat foggy, let down
- ☐ Foggy; losing interest in remaining awake; slowed down
- ☐ Sleepy, woozy, fighting sleep; prefer to lie down
- ☐ No longer fighting sleep, sleep onset soon; having dream-like thoughts
- ❖ Asleep

FOSQ

Study ID _____ Date_____

Some people have difficulty performing everyday activities when they feel tired or sleepy. The purpose of this questionnaire is to find out if you generally have difficulty carrying out certain activities because you are too sleepy or tired. In this questionnaire, when the words “sleepy” or “tired” are used, it means the feeling that you can’t keep your eyes open, your head is droopy, that you want to “nod off”, or that you feel the urge to take a nap. These words do not refer to the tired or fatigued feeling you may have after you have exercised.

Please circle one answer for each question. Please try to be as accurate as possible.

0 – I don’t do this activity for other reasons
1 – No difficulty
2 – Yes, a little difficulty
3 – Yes, Moderate difficulty
4 – Yes, Extreme difficulty

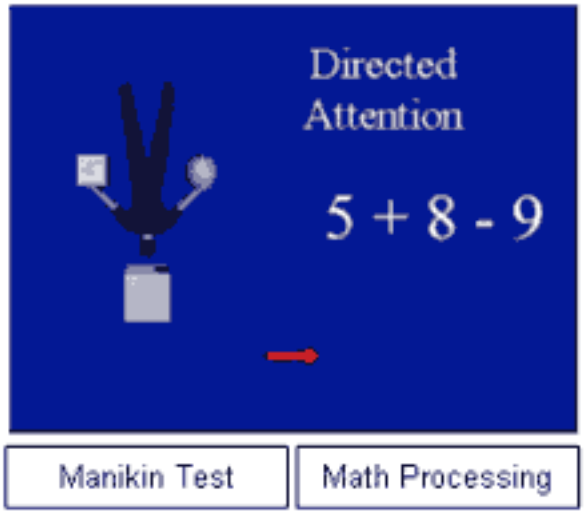
1. Do you generally have difficulty concentrating on things you do because you are sleepy or tired?	0	1	2	3	4
2. Do you generally have difficulty remembering things because you are sleepy or tired?	0	1	2	3	4
3. Do you have difficulty finishing a meal because you become sleepy or tired?	0	1	2	3	4
4. Do you have difficulty working on a hobby (for example: sewing, collecting, gardening) because you are sleepy or tired?	0	1	2	3	4
5. Do you have difficulty doing work around the house (for example: cleaning house, doing laundry, taking out the trash, repair work) because you are sleepy or tired?	0	1	2	3	4
6. Do you have difficulty operating a motor vehicle for short distances (less than 100 miles) because you become sleepy or tired?	0	1	2	3	4
7. Do you have difficulty operating a motor vehicle for long distances (greater than 100 miles) because you become sleepy or tired?	0	1	2	3	4
8. Do you have difficulty getting things done because you are too sleepy or tired to drive or take public transportation?	0	1	2	3	4
9. Do you have difficulty take care of financial affairs and doing paperwork (for example: writing checks, paying bills, keeping financial records, filling out tax forms, etc.) because you are sleepy or tired?	0	1	2	3	4
10. Do you have difficulty performing employed or volunteer work because you are sleepy or tired?	0	1	2	3	4
11. Do you have difficulty maintaining a telephone conversation because you become sleepy or tired?	0	1	2	3	4

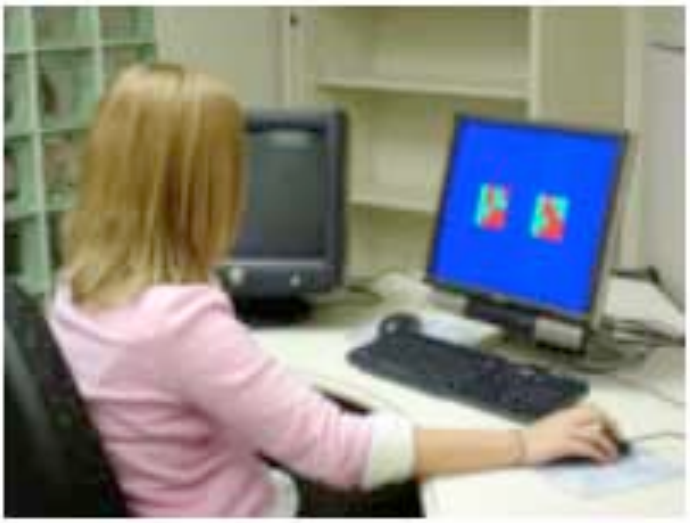
0 – I don’t do this activity for other reasons

1 – No difficulty
2 – Yes, a little difficulty
3 – Yes, Moderate difficulty
4 – Yes, Extreme difficulty

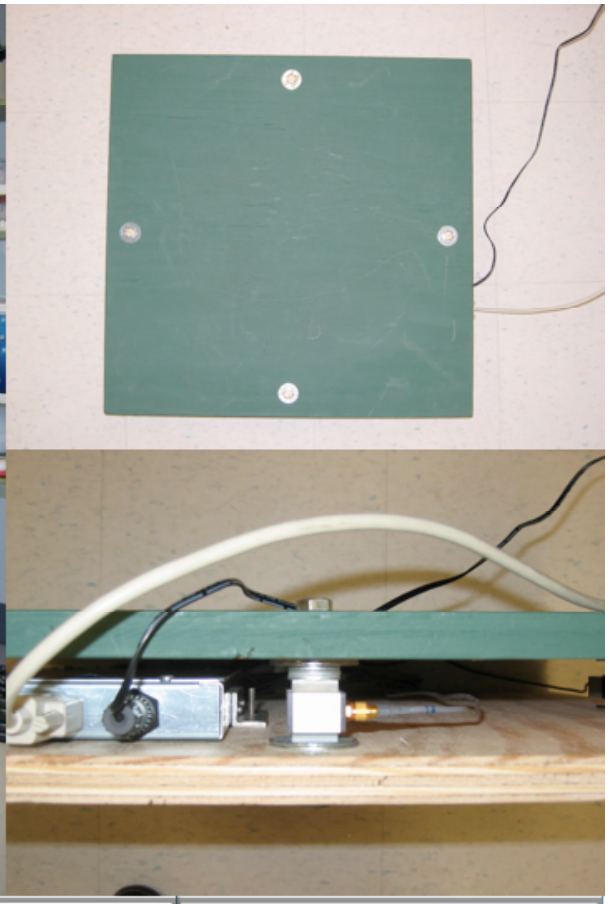
12. Do you have difficulty visiting with your family or friends in **your** home because you become sleepy or tired?	0	1	2	3	4
13. Do you have difficulty visiting with your family or friends in **their** homes because you become sleepy or tired?	0	1	2	3	4
14. Do you have difficulty doing things for your family or friends because you become sleepy or tired?	0	1	2	3	4
15. Has your relationship with family, friends or work colleagues been affected because you are sleepy or tired?		1	2	3	4
16. Do you have difficulty exercising or participating in a sporting activity because you are too sleepy or tired?	0	1	2	3	4
17. Do you have difficulty watching a movie or videotape because you become sleepy or tired?	0	1	2	3	4
18. Do you have difficulty enjoying the theater or a lecture because you become sleepy or tired?	0	1	2	3	4
19. Do you have difficulty enjoying a concert because you become sleepy or tired?	0	1	2	3	4
20. Do you have difficulty watching television because you are sleepy or tired?	0	1	2	3	4
21. Do you have difficulty participating in religious services, meetings or a group club because you are sleepy or tired?	0	1	2	3	4
22. Do you have difficulty being as active as you want to be in the evening because you are sleepy or tired?	0	1	2	3	4
23. Do you have difficulty being as active as you want to be in the morning because you are sleepy or tired?	0	1	2	3	4
24. Do you have difficulty being as active as you want to be in the afternoon because you are sleepy or tired?	0	1	2	3	4
25. Do you have difficulty keeping a pace with others your own age because you are sleepy or tired?	0	1	2	3	4
26. How would you rate yourself in your general level of activity?		1	2	3	4
		1= Very low; 2= Low; 3= Medium; 4= High			
27. Has your intimate or sexual relationship been affected because you are sleepy or tired?	0	1	2	3	4
28. Has your desire for intimacy or sex been affected because you are sleepy or tired?	0	1	2	3	4
29. Has your ability to become sexually aroused been affected because you are sleepy or tired?	0	1	2	3	4
30. Has your ability to have an orgasm been affected because you are sleepy or tired?	0	1	2	3	4

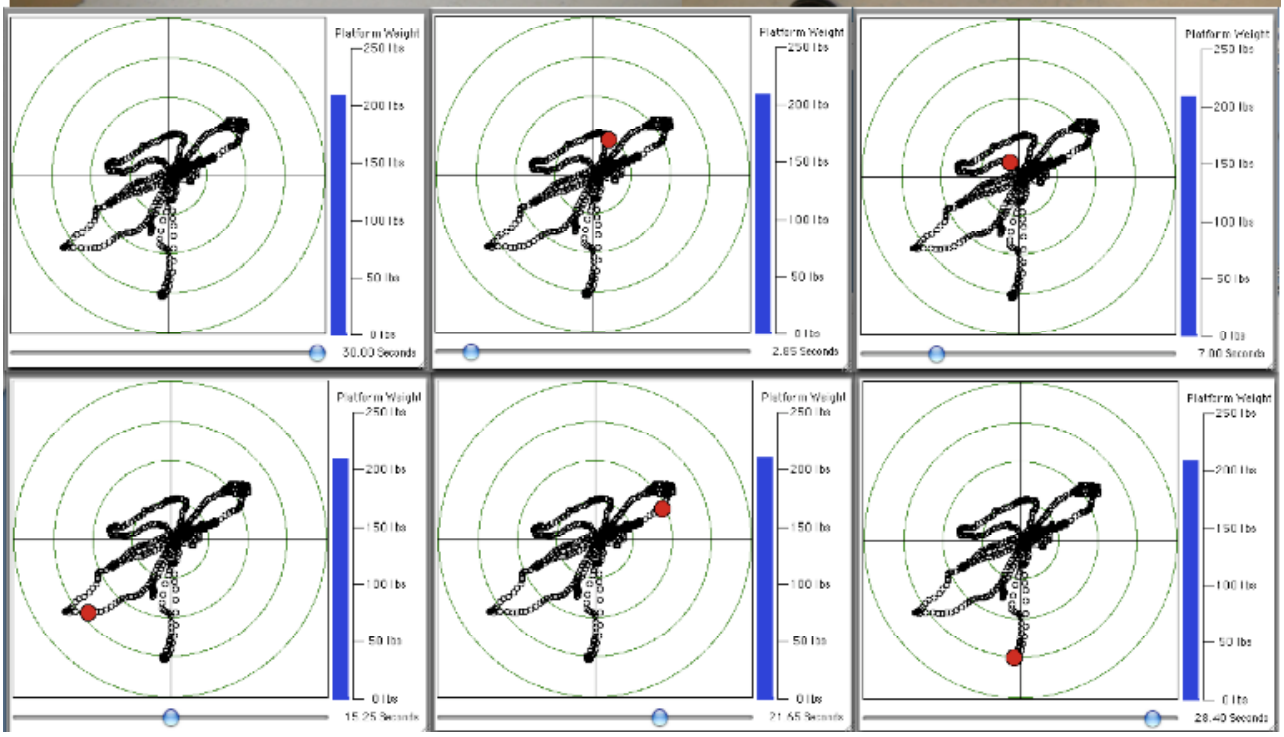
Automated Neuropsychological Assessment Metrics (ANAM4)





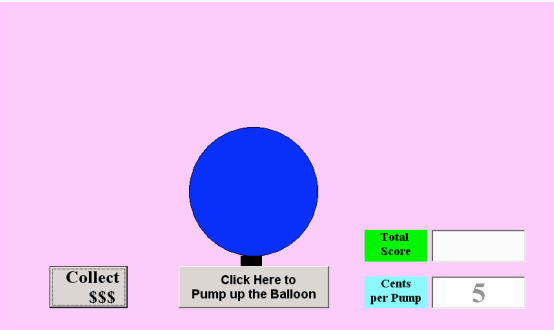
Body Sway and Stability Test





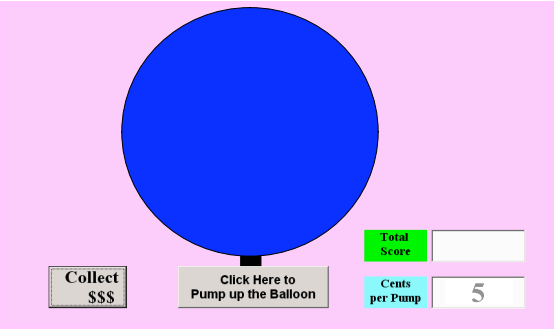
Balloon Analog Risk Task

Inflate Balloon by Pressing Key



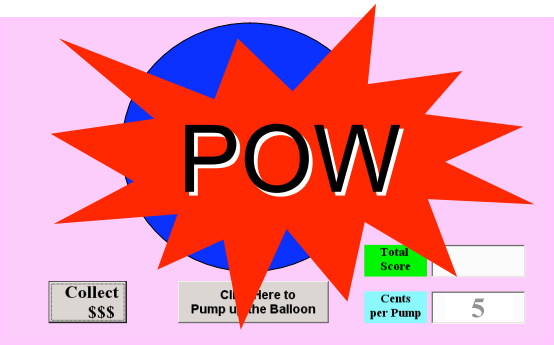
- The BART presents participants with 30 virtual balloons.
- Each balloon can be inflated one increment for each key press.

Balloon Grows in Size and $$$ Value



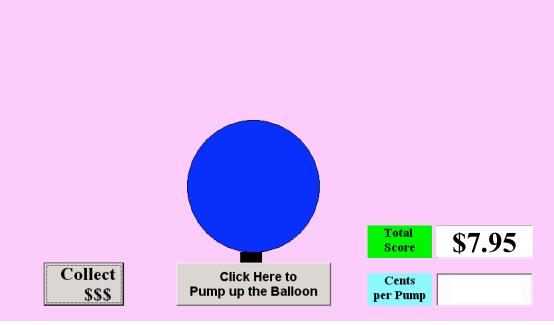
- With each key press the size of the balloon increases.
- Each increment also increases the potential value of the balloon by 5 cents.
- The balloon can be "cashed in" at any time and the total accumulated value retained.

If Balloon Explodes, All $$$ is Lost



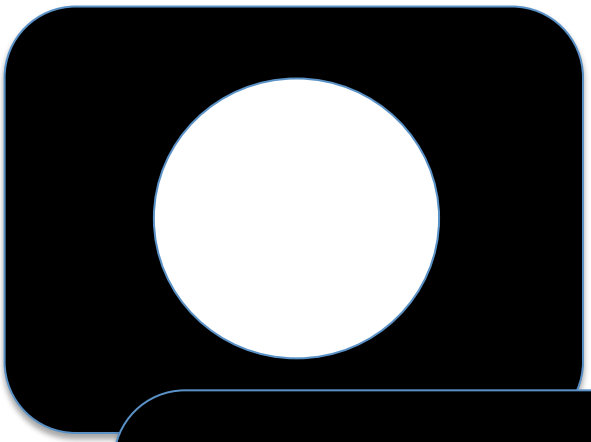
- Each balloon can explode at any time.
- If a balloon explodes, all of the potential money accumulated *for that balloon* will be lost.

Goal: Earn as Much Money as Possible

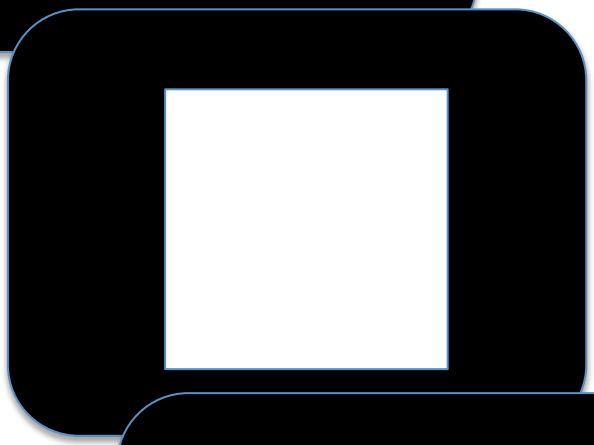


- The goal is to maximize winnings.
- Only 30 balloons are presented

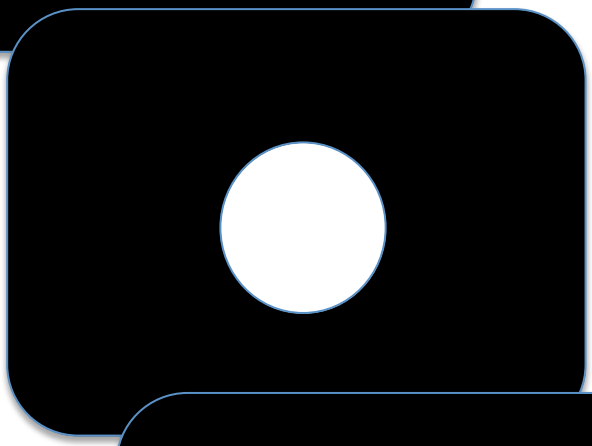
Go/No-Go Task



Go



Go

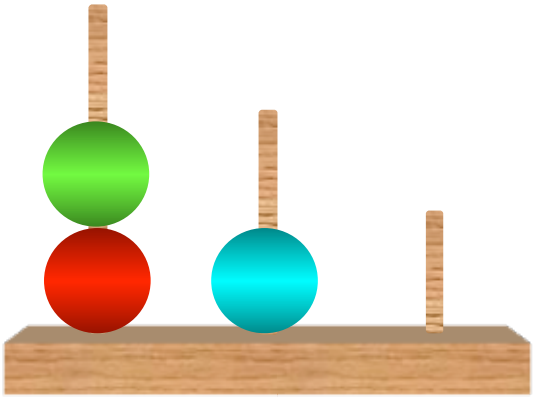


Go

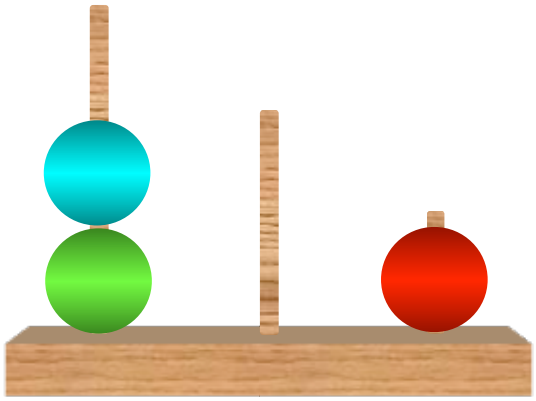
No Go

Tower of London Task

Your Tower

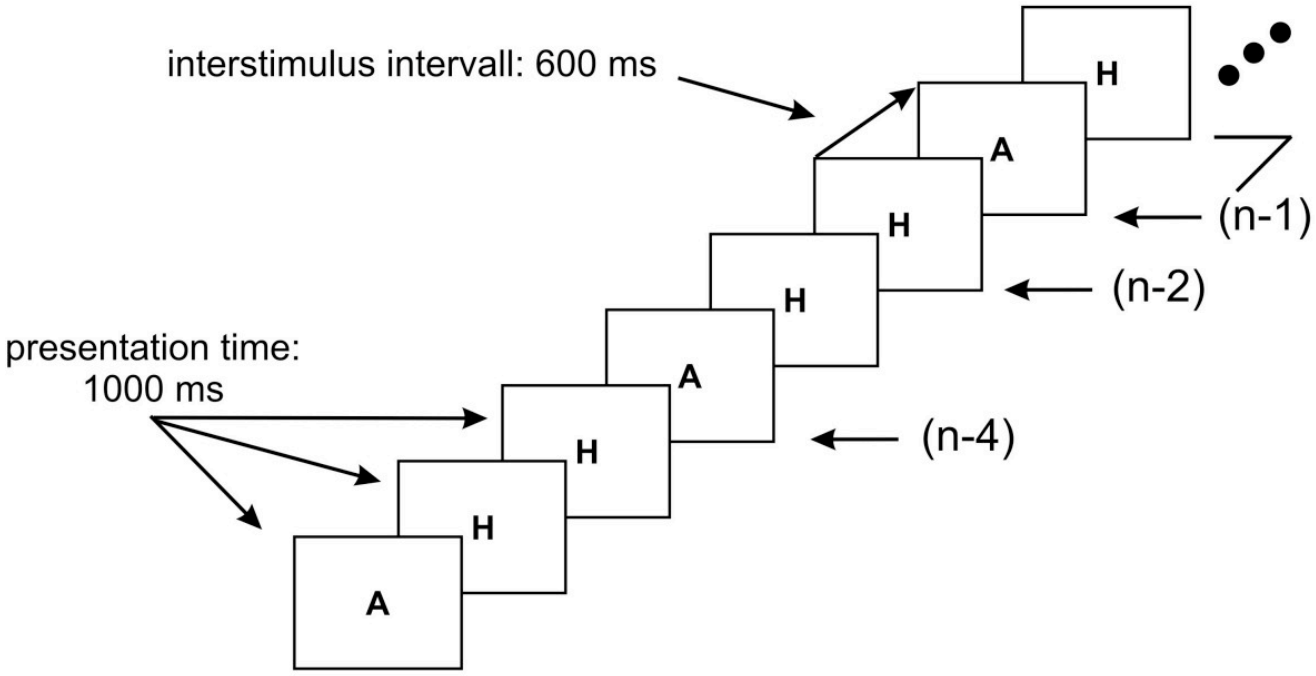


Goal



Multi-Source Interference Task (MSIT)

N-back task


interstimulus intervall: 600 ms
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Personality Assessment Inventory (PAI)

Personality Assessment Inventory™ (PAI®)

Leslie C. Morey, PhD

Revised and updated materials help increase the accuracy of personality assessment.

Purpose: 22 nonoverlapping full scales provide a comprehensive assessment of adult psychopathology in ages 18 years and older

Age Range: Adult
Elder Adult

Admin: Individual or group

Time: 50-60 minutes to administer; 15-20 minutes to score

Qualification: C

Sample Reports: N/A

Related Products: PAI® Professional Report Service
PAI® Software Portfolio
Personality Assessment Inventory™-Adolescent

With its newly revised Professional Manual, Profile Form Adults-Revised, and Critical Items Form-Revised, the PAI® continues to raise the standard for the assessment of adult psychopathology. This objective inventory of adult personality assesses psychopathological syndromes and provides information relevant for clinical diagnosis, treatment planning, and screening for psychopathology. Since its introduction, the PAI has been heralded as one of the most important innovations in the field of clinical assessment.

PAI® Scales and Subscales

The 344 PAI items constitute 22 nonoverlapping scales covering the constructs most relevant to a broad-based assessment of mental disorders: 4 validity scales, 11 clinical scales, 5 treatment scales, and 2 interpersonal scales. To facilitate interpretation and to cover the full range of complex clinical constructs, 10 scales contain conceptually derived subscales.

The PAI Clinical scales were developed to provide information about critical diagnostic features of 11 important clinical constructs. These 11 scales may be divided into three broad classes of disorders: those within the neurotic spectrum, those within the psychotic spectrum, and those associated with behavior disorder or impulse control problems.

The Treatment scales were developed to provide indicators of potential complications in treatment that would not necessarily be apparent from diagnostic information. These five scales include two indicators of potential for harm to self or others, two measures of the respondent's environmental circumstances, and one indicator of the respondent's motivation for treatment.

The Interpersonal scales were developed to provide an assessment of the respondent's interpersonal style along two dimensions: a warmly affiliative versus a cold rejecting style, and a dominating/controlling versus a meekly submissive style. These axes provide a useful way of conceptualizing many different mental disorders: persons at the extremes of these dimensions may present with a variety of disorders. A number of studies provide evidence that diagnostic groups differ on these dimensions.

The PAI includes a Borderline Features scale and an Antisocial Features scale. Both of these scales specifically assess character pathology. The Borderline Features scale is the only PAI scale that has four subscales, reflecting the factorial complexity of the construct. The Antisocial Features scale includes a total of three facets: one assessing antisocial behaviors, and the other two assessing antisocial traits.

Psychomotor Vigilance Test

Press the spacebar every time an “x” appears on the screen.

Curriculum Vitae

Date Prepared: **October 3, 2011**

Name: WILLIAM DALE (SCOTT) KILLGORE

Office Address: Neuroimaging Center
McLean Hospital
115 Mill Street
Belmont, MA 02478 United States

Home Address: 1 Saint Gerard Terrace
Unit #1
Cambridge, MA 02140 United States

Work Phone: (617) 855-3166

Work Email: killgore@mclean.harvard.edu

Work FAX: (617) 855-2770

Place of Birth: Anchorage, AK

Education

1985	A.A. (Liberal Arts), San Antonio College
1985	A.A.S (Radio-TV-Film), San Antonio College
1990	B.A. (Psychology), Summa cum laude with Distinction, University of New Mexico
1992	M.A. (Clinical Psychology), Texas Tech University
1996	PH.D. (Clinical Psychology), Texas Tech University

Postdoctoral Training

08/95-07/96	Predoctoral Fellow, Clinical Psychology, Yale School of Medicine
08/96-07/97	Postdoctoral Fellow, Clinical Neuropsychology, University of OK Health Sciences Center
08/97-07/99	Postdoctoral Fellow, Clinical Neuropsychology, University of Pennsylvania Medical School
07/99-09/00	Research Fellow, Neuroimaging, McLean Hospital/ Harvard Medical School

Faculty Academic Appointments

10/00-08/02	Instructor in Psychology in the Department of Psychiatry Harvard Medical School, Boston, MA
09/02-07/07	Clinical Instructor in Psychology in the Department of Psychiatry Harvard Medical School, Boston, MA
08/07-10/10	Instructor in Psychology in the Department of Psychiatry Harvard Medical School, Boston, MA
04/08-	Faculty Affiliate, Division of Sleep Medicine Harvard Medical School, Boston, MA

10/10- Assistant Professor of Psychology in the Department of Psychiatry
Harvard Medical School, Boston, MA

Appointments at Hospitals/Affiliated Institutions

10/00-08/02 Assistant Research Psychologist, McLean Hospital, Belmont, MA
08/02-07/04 Research Psychologist, Department of Behavioral Biology, Walter Reed Army Institute of Research, Silver Spring, MD
09/02-04/05 Special Volunteer, National Institute on Deafness and Other Communication Disorders (NIDCD), National Institutes of Health (NIH), Bethesda, MD
09/02-07/07 Consultant in Psychology, McLean Hospital, Belmont, MA
08/04-10/07 Chief, Neurocognitive Performance Branch, Walter Reed Army Institute of Research, Silver Spring, MD
08/05-07/06 Neuropsychology Postdoctoral Program Training Supervisor, Walter Reed Hospital, Washington, DC
08/07- Research Psychologist, McLean Hospital, Belmont, MA
05/11- Co-Director, Social, Cognitive, and Affective Neuroscience Laboratory, McLean Hospital, Belmont, MA

Other Professional Positions

11/01-08/02 First Lieutenant, Medical Service Corps, United States Army Reserve (USAR)
08/02-07/05 Captain, Medical Service Corps, United States Army
08/05-10/07 Major, Medical Service Corps, United States Army
10/07- Major, Medical Service Corps, United States Army Reserve (USAR)
10/07-3/10 Chief Psychologist, GovSource, Inc., U.S. Department of Defense Government Contractor
8/08- Consulting Psychologist, The Brain Institute, University of Utah

Major Administrative Leadership Positions

Local

1988-1989 Undergraduate Teaching Assistant-Introduction to Psychology 102, University of New Mexico
Responsibility: Responsible for instructing two independent discussion sections of a large introductory psychology course. Responsibilities included lecture preparation, leading discussion, writing and administering quizzes, grading reports, tests, and weekly assignments as well as proctoring major exams.

1990-1991 Graduate Teaching Assistant-General Psychology 1300, Texas Tech University
Responsibility: Complete instructional responsibility for two introductory level psychology courses per semester. Responsibilities included curriculum development, preparation and administration of lectures, test and report grading, supervision of computerized student testing, and assignment of final course grades.

1991-1992 Graduate Teaching Assistant-Psychology of Learning Laboratory 3317, Texas Tech

University
Responsibility: Instructional responsibility for two upper division level psychology laboratory courses per semester. Responsibilities included curriculum development, lesson writing, classroom lecture, experiment demonstrations, test and report grading for a writing intensive laboratory course.

Committee Service

Local

2003 Scientific Review Committee, Walter Reed Army Institute of Research (WRAIR), Silver Spring, MD

2005 Scientific Review Committee, Walter Reed Army Institute of Research (WRAIR), Silver Spring, MD

Regional

2005-2006 Undergraduate Honors Thesis Committee, Jessica Richards [Chairperson], University of Maryland, Baltimore County

2011 Scientific Review Committee, U.S. Army Institute of Environmental Medicine (USARIEM), Natick, MA

National

2011- National Network of Depression Centers, Military Task Group

International

2005-2006 Doctoral Thesis Committee, Belinda J. Liddell, University of Sydney, Australia

Professional Societies

1995-1997 American Psychological Association, Member

1998-2000 National Academy of Neuropsychology, Member

Grant Review Activities

National

2004 University of Alabama, Clinical Nutrition Research Center (UAB CNRC) Pilot/Feasibility Study Program Review Committee

2006 U.S. Small Business Administration, Small Business Technology Transfer (STTR) Program Review Committee

2006 Cognitive Performance Assessment Program Area Steering Committee, U.S. Army Military Operational Medicine Research Program Funding Panel

2007 Cognitive Performance Assessment Program Area Steering Committee, U.S. Army Military Operational Medicine Research Program Funding Panel

2008 United States Army Medical Research and Materiel Command (USAMRMC) Congressionally Directed Medical Research Programs (CDMRP) Extramural Grant Review Panel

2009 NIH-CSR Brain Disorders and Clinical Neuroscience N02 Member Study Conflict Section Review Panel

2009 Sleep Physiology and Fatigue Interventions Program Area Steering Committee, U.S. Army Military Operational Medicine Research Program

2011 National Science Foundation (NSF) Grant Reviewer

International

2009 Scotland, UK, Biomedical and Therapeutic Research Committee, Grant Reviewer
2010 Canada, Social Sciences and Humanities Research Council of Canada, Grant Reviewer
2011 Israel, Israel Science Foundation (ISF), Grant Reviewer

Editorial Activities

2001-2011 Reviewer, Psychological Reports
2001-2011 Reviewer, Perceptual and Motor Skills
2002 Reviewer, American Journal of Psychiatry
2002-2009 Reviewer, Biological Psychiatry
2003 Reviewer, Clinical Neurology and Neurosurgery
2004 Reviewer, NeuroImage
2004-2006 Reviewer, Neuropsychologia
2004 Reviewer, Journal of Neuroscience
2004 Reviewer, Consciousness and Cognition
2005 Reviewer, Experimental Brain Research
2005 Reviewer, Schizophrenia Research
2005-2009 Reviewer, Archives of General Psychiatry
2005 Reviewer, Behavioral Brain Research
2005-2009 Reviewer, Human Brain Mapping
2005-2006 Reviewer, Psychiatry Research: Neuroimaging
2006 Reviewer, Journal of Abnormal Psychology
2006 Reviewer, Psychopharmacology
2006 Reviewer, Developmental Science
2006 Reviewer, Acta Psychologica
2006 Reviewer, Neuroscience Letters
2006-2011 Reviewer, Journal of Sleep Research
2006-2007 Reviewer, Physiology and Behavior
2006-2011 Reviewer, SLEEP
2007 Reviewer, Journal of Clinical and Experimental Neuropsychology
2008 Reviewer, European Journal of Child and Adolescent Psychiatry
2008 Reviewer, Judgment and Decision Making
2008-2010 Reviewer, Aviation, Space, & Environmental Medicine
2008 Reviewer, Journal of Psychophysiology
2008 Reviewer, Brazilian Journal of Medical and Biological Research
2008 Reviewer, The Harvard Undergraduate Research Journal
2008 Reviewer, Bipolar Disorders
2008-2010 Reviewer, Chronobiology International
2008 Reviewer, International Journal of Obesity
2009 Reviewer, European Journal of Neuroscience

2009-2011	Reviewer, International Journal of Eating Disorders
2009	Reviewer, Psychophysiology
2009	Reviewer, Traumatology
2009	Reviewer, Clinical Medicine: Therapeutics
2009	Reviewer, Acta Pharmacologica Sinica
2009	Reviewer, Collegium Antropologicum
2009	Reviewer, Journal of Psychopharmacology
2009-2010	Reviewer, Obesity
2009	Reviewer, Scientific Research and Essays
2009	Reviewer, Child Development Perspectives
2009-2010	Reviewer, Personality and Individual Differences
2009-2010	Reviewer, Noise and Health
2009-2010	Reviewer, Sleep Medicine
2010	Reviewer, Nature and Science of Sleep
2010	Reviewer, Psychiatry and Clinical Neurosciences
2010	Reviewer, Learning and Individual Differences
2010	Reviewer, Cognitive, Affective, and Behavioral Neuroscience
2010	Reviewer, BMC Medical Research Methodology
2010-2011	Reviewer, Journal of Adolescence
2010	Reviewer, Brain Research
2011	Reviewer, Brain
2011	Reviewer, Social Cognitive and Affective Neuroscience
2011	Reviewer, Journal of Traumatic Stress
2011	Reviewer, Social Neuroscience
2011	Reviewer, Brain and Cognition
2011	Reviewer, Frontiers in Neuroscience
2011	Reviewer, Sleep Medicine Reviews

Other Editorial Roles

2009-	Editorial Board Member	International Journal of Eating Disorders

Honors and Prizes

1990	Outstanding Senior Honors Thesis in Psychology, University of New Mexico
1990-1995	Maxey Scholarship in Psychology, Texas Tech University
2001	Rennick Research Award, Co-Authored Paper, International Neuropsychological Society
2002	Honor Graduate, AMEDD Officer Basic Course, U.S. Army Medical Department Center and School
2002	Lynch Leadership Award Nominee, AMEDD Officer Basic Course, U.S. Army Medical Department Center and School
2003	Outstanding Research Presentation Award, 2003 Force Health Protection Conference, U.S. Army Center for Health Promotion and Preventive Medicine

2005	Edward L. Buescher Award for Excellence in Research by a Young Scientist, Walter Reed Army Institute of Research (WRAIR) Association
2009	Merit Poster Award, International Neuropsychological Society
2009	Outstanding Research Presentation Award, 2009 Force Health Protection Conference, U.S. Army Center for Health Promotion and Preventive Medicine
2010	Best Paper Award, Neuroscience, 27th U.S. Army Science Conference
2011	Blue Ribbon Finalist, 2011 Top Poster Award in Clinical and Translational Research, Society of Biological Psychiatry

Report of Funded and Unfunded Projects

Funding Information

Past

2001-2003	fMRI of Unconscious Affect Processing in Adolescence. N.I.H., 1R03HD41542-01 P.I. ($79,000.)
2003-2006	The Effects of Sleep-Loss and Stimulant Countermeasures on Judgment and Decision Making. U.S. Army Medical Research and Materiel Command (USAMRMC) Competitive Medical Research Proposal Program (CMRP), P.I. (Total Award: $1,345,000.)
2004-2005	Sleep/wake Schedules in 3ID Aviation Brigade Soldiers. Defense Advanced Research Projects Agency (DARPA) P.I. (Total Award: $60,000.)
2005-2006	Functional Neuroimaging Studies of Neural Processing Changes with Sleep and Sleep Deprivation. U.S. Army Medical Research and Materiel Command (USAMRMC) Task Area C (Warfighter Judgment and Decision Making) Program Funding P.I. (Total Award: $219,400.)
2006-2007	Establishing Normative Data Sets for a Series of Tasks to Measure the Cognitive Effects of Operationally Relevant Stressors. U.S. Army Medical Research and Materiel Command (USAMRMC) Task Area C (Warfighter Judgment and Decision Making) Program Funding, P.I., (Total Award:$154,000.)
2006-2007	Military Operational Medicine Research Program (MOM-RP), Development of the Sleep History and Readiness Predictor (SHARP). U.S. Army Medical Research and Materiel Command (USAMRMC) P.I. (Total Award:$291,000.)

Current

2009-2012	The Neurobiological Basis and Potential Modification of Emotional Intelligence through

Affective Behavioral Training.
U.S. Army Medical Research and Materiel Command (USAMRMC),
P.I. (Total Award: $414,461.)

2011-2014 Effects of Bright Light Therapy on Sleep, Cognition, and Brain Function following Mild Traumatic Brain Injury.
U.S. Army Medical Research and Materiel Command (USAMRMC),
P.I. (Total Award: $754,040)

2012-2015 Internet Based Cognitive Behavioral Therapy Effects on Depressive Cognitions and Brain function.
U.S. Army Medical Research and Materiel Command (USAMRMC),
Co-PI (Total Award: $1,646,045)

Report of Local Teaching and Training

Laboratory and Other Research Supervisory and Training Responsibilities

2005-2006 1 Fellow for 250 hrs/year, Neuropsychology Postdoctoral Research Training Program Supervisor, Walter Reed Hospital

Formally Supervised Trainees

1997-1999	David Glahn, Ph.D.	Associate Professor, Yale University School of Medicine
1997-1999	Daniel Casasanto, Ph.D.	Senior Scientist/Lecturer, Max Plank Institute for Psycholinguistics
2002-2005	Alexander Vo, Ph.D.	Associate Professor, UTMB, Executive Director of Telemedicine
2002-2007	Rebecca Reichardt, M.A.	Human Subjects Protection Scientist, USAMRMC
2003-2004	Stan Liu, M.D.	Medical Intern, Johns Hopkins Medical School
2003-2004	Neil Arora, B.A.	Student, Yale University
2003-2005	Nancy Grugle, Ph.D.	Assistant Professor, Cleveland State University
2003-2005	Joshua Bailey, B.A.	Seminary Student
2003-2006	Athena Kendall, M.A.	Lab Manager, Walter Reed Army Medical Center
2003-2006	Lisa Day, M.S.W.	Clinical Social Worker, Washington D.C.
2004-2005	Merica Shepherd, B.A.	Laboratory Coordinator
2004-2005	Cynthia Hawes, B.A.	Research Program Coordinator
2004-2006	Christopher Li, B.A.	Graduate Student
2004-2007	Jessica Richards, B.A.	Ph.D. Student, University of Maryland College Park
2004-2007	Erica Lipizzi, B.A.	Graduate Student, Emory University
2004-2007	Brian Leavitt, B.S.	Research Technician, Walter Reed Army Institute of Research
2004-2007	Rachel Newman, B.S.	Senior Laboratory Manager, Walter Reed
2004-2007	Alexandra Krugler, B.S.	Medical Student, Louisiana State University
2005	Amy Conrad, PH.D.	Clinical Psychologist, Washington D.C.
2005-2006	Nathan Huck, PH.D.	Clinical Neuropsychologist, Walter Reed Army Institute of

		Research
2005-2006	Ellen Kahn-Greene, Ph.D.	Post-Doctoral Fellow, Boston VA
2005-2006	Alison Muckle, B.A.	Research Technician
2005-2006	Christina Murray, B.S.	Medical Student, Drexel University
2005-2007	Gautham Ganesan	Medical Student, UC Irvine
2005-2007	Dante Picchioni, Ph.D.	Research Psychologist, Walter Reed Army Institute of Research
2006-2007	Tracy Rupp, Ph.D.	Research Psychologist, Walter Reed Army Institute of Research
2006-2007	Kacie Smith, B.A.	Study Manager, Walter Reed Army Institute of Research
2006-2007	Shane Smith, B.S.	Medical Student, University of the West Indies
2006-2007	Shanelle McNair	Research Technician, Walter Reed Army Institute of Research
2006-2007	George Watlington	Research Technician, Walter Reed Army Institute of Research
2008	Grady O'Brien	Undergraduate Student
2008-2009	Alex Post	Undergraduate Student
2008-2009	Lauren Price, B.A.	Senior Clinical Research Assistant, McLean Hospital
2009-	Zachary Schwab, B.S.	Research Assistant, McLean Hospital
2009-	Melissa Weiner, B.S.	Graduate Student, Yale School of Public Health
2010-	Norah Simpson, Ph.D.	Post-Doctoral Fellow, Beth Israel Deaconess/Harvard Medical School
2010-	Vincent Capaldi, M.D.	Medical Resident, Walter Reed Army Medical Ctr.
2010-	Deepa Acharya, Ph.D.	Clinical Neuropsychologist, McLean Hospital/Harvard Medical School
2010-	Christina Song	Undergraduate Student, Smith College
2011-	Jill Kizielewicz	Undergdaduate Student, Hamilton College
2011-	Sophie DelDonno, B.A.	Research Assistant, McLean Hospital
2011-	Maia Kipman, B.A.	Research Assistant, McLean Hospital
2011-	Michael Covell, B.A.	Research Assistant, McLean Hospital
2011	Mareen Weber, Ph.D.	Post-Doctoral Fellow, Harvard Medical School

Local Invited Presentations

2000 The Neurobiology of Emotion in Children, McLean Hospital
Lecturer: 30 participants, 2 hours contact time per year, 10 hours prep time per year.
[Invited Lecture]

2001 The Neurobiology of Emotion in Children and Adolescents, McLean Hospital
Lecturer: 60 participants, 2 hours contact time per year, 10 hours prep time per year.
[Invited Lecture]

2005 Briefing to the Chairman of the Congressional Committee on Strategies to Protect the Health of Deployed U.S. Forces, John H. Moxley, on the Optimization of Judgment and Decision Making Capacities in Soldiers Following Sleep Deprivation, Walter Reed Army Institute of Research, Washington, DC*[Invited Lecture]*

2005 Lecture on Functional Neuroimaging, Cognitive Assessment, and the Enhancement of Soldier Performance, Walter Reed Army Institute of Research, Washington, DC *[Invited Lecture]*

2006 Lecture on Optimization of Judgment and Decision Making Capacities in Soldiers Following Sleep Deprivation, Brain Imaging Center, McLean Hospital, Belmont MA *[Invited Lecture]*

2006 Briefing to the Chairman of the Cognitive Performance Assessment Program Area Steering Committee, U.S. Army Military Operational Medicine Research Program, entitled Optimization of Judgment and Decision Making Capacities in Soldiers Following Sleep Deprivation, Walter Reed Army Institute of Research *[Invited Lecture]*

2010 Lecture on Patterns of Cortico-Limbic Activation Across Anxiety Disorders, Center for Anxiety, Depression, and Stress, McLean Hospital, Belmont, MA *[Invited Lecture]*

2010 Lecture on Cortico-Limbic Activation Among Anxiety Disorders, Neuroimaging Center, McLean Hospital, Belmont, MA *[Invited Lecture]*

2011 Lecture on Shared and Differential Patterns of Cortico-Limbic Activation Across Anxiety Disorders, McLean Research Day Brief Communications, McLean Hospital, Belmont, MA *[Invited Lecture]*

Report of Regional, National and International Invited Teaching and Presentations

Invited Presentations and Courses

Regional

2001 Using Functional MRI to Study the Developing Brain, Judge Baker Children's Center
Lecturer: 8 participants, 2 hours contact time per year, 10 hours prep time per year
[Invited Seminar]

2002 Cortico-Limbic Activation in Adolescence and Adulthood, Youth Advocacy Project, Cape Cod, MA
Lecturer: 45 participants, 2 hours contact time per year, 10 hours prep time per year
[Invited Lecture]

2006 Lecture on Norming a Battery of Tasks to Measure the Cognitive Effects of Operationally Relevant Stressors, Cognitive Performance Assessment Program Area Steering Committee, U.S. Army Military Operational Medicine Research Program, Washington, DC*[Invited Lecture]*

2007 Lecture on Cerebral Responses During Visual Processing of Food, U.S. Army Institute of Environmental Medicine, Natick, MA*[Invited Lecture]*

2007 Briefing on the Measurement of Sleep-Wake Cycles and Cognitive Performance in Combat Aviators, U.S. Department of Defense, Defense Advanced Research Projects Agency (DARPA), Washington, DC

2008 Lecture on Sleep Deprivation, Executive Function, and Resilience to Sleep Loss; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

2008 Lecture on the Role of Research Psychology in the Army; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA*[Invited Lecture]*

2008 Lecture on Combat Stress Control: Basic Battlemind Training; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA*[Invited Lecture]*

2009 Lecture entitled Evaluate a Casualty, Prevent Shock, and Prevent Cold Weather injuries; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA*[Invited Lecture]*

2009 Lecture on Combat Exposure and Sleep Deprivation Effects on Risky Decision-Making; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

2009 Lecture on the Sleep History and Readiness Predictor (SHARP); 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

2009 Lecture on The Use of Actigraphy for Measuring Sleep in Combat and Military Training; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

2010 Lecture entitled Casualty Evaluation; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

2010 Lecture entitled Combat Stress and Risk-Taking Behavior Following Deployment; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

2010 Lecture entitled Historical Perspectives on Combat Medicine at the Battle of Gettysburg; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

2010 Lecture entitled Sleep Loss, Stimulants, and Decision-Making; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

2010 Lecture entitled PTSD: New Insights from Brain Imaging; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

2011 Lecture entitled Effects of bright light therapy on sleep, cognition and brain function after mild traumatic brain injury; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

2011 Lecture entitled Laboratory Sciences and Research Psychology in the Army; 105th IMA

Detachment, U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

2011 Lecture entitled Tools for Assessing Sleep in Military Settings; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

2011 Lecture entitled The Brain Basis of Emotional Trauma and Practical Issues in Supporting Victims of Trauma, U.S. Department of Justice, United States Attorneys Office, Serving Victims of Crime Training Program, Holyoke, MA, *[Invited Lecture]*

2011 Lecture entitled The Brain Altering Effects of Traumatic Experiences; 105th Reinforcement Training Unit (RTU), U.S. Army Reserve Center, Boston, MA *[Invited Lecture]*

National

2000 Lecture on the Neurobiology of Emotional Development in Children, 9th Annual Parents as Teachers Born to Learn Conference, St. Louis, MO*[Invited Lecture]*

2002 Lecture on the Changes in the Lateralized Structure and Function of the Brain during Adolescent Development, Walter Reed Army Institute of Research, Washington, DC*[Invited Lecture]*

2004 Lecture on Sleep Deprivation, Cognition, and Stimulant Countermeasures: Seminar Presented at the Bi-Annual 71F Research Psychology Short Course, Ft. Detrick, MD, U.S. Army Medical Research and Materiel Command*[Invited Lecture]*

2004 Lecture on the Regional Cerebral Blood Flow Correlates of Electroencephalographic Activity During Stage 2 and Slow Wave Sleep: An H215O PET Study: Presented at the Bi-Annual 71F Research Psychology Short Course, Ft. Detrick, MD, U.S. Army Medical Research and Materiel Command*[Invited Lecture]*

2004 Oral Platform Presentation: Regional cerebral metabolic correlates of electroencephalographic activity during stage-2 and slow-wave sleep: An H215O PET Study, 18th Associated Professional Sleep Societies Annual Meeting, Philadelphia, PA.

2005 Lecture on The Sleep History and Readiness Predictor: Presented to the Medical Research and Materiel Command, Ft. Detrick, MD.*[Invited Lecture]*

2006 Lecture on The Sleep History and Readiness Predictor: Presented at the Bi-Annual 71F Research Psychology Short Course, Ft. Rucker, AL, U.S. Army Medical Research and Materiel Command*[Invited Lecture]*

2007 Lecture on the Effects of Fatigue and Pharmacological Countermeasures on Judgment and Decision-Making, U.S. Army Aeromedical Research Laboratory, Fort Rucker, AL *[Invited Lecture]*

2008 Lecture on the Validation of Actigraphy and the SHARP as Methods of Measuring Sleep and Performance in Soldiers, U.S. Army Aeromedical Research Laboratory, Fort Rucker, AL*[Seminar]*

2009 Lecture on Sleep Deprivation, Executive Function, and Resilience to Sleep Loss: Walter Reed Army Institute of Research AIBS Review, Washington DC*[Invited Lecture]*

2009 Lecture Entitled: Influences of Combat Exposure and Sleep Deprivation on Risky Decision-Making, Evans U.S. Army Hospital, Fort Carson, CO*[Invited Lecture]*

2009 Lecture on Making Bad Choices: The Effects of Combat Exposure and Sleep Deprivation on Risky Decision-Making, 4th Army, Division West, Quarterly Safety Briefing to the Commanding General and Staff, Fort Carson, CO*[Invited Lecture]*

2009 Symposium on Sleep Deprivation, Judgment, and Decision-Making, 23rd Annual Meeting of the Associated Professional Sleep Societies, Seattle, WA*[Invited Lecture]*

2009 Symposium Session Moderator: Workshop on Components of Cognition and Fatigue: From Laboratory Experiments to Mathematical Modeling and Operational Applications, Washington State University, Spokane, WA*[Invited Speaker]*

2009 Lecture on Comparative Studies of Stimulant Action as Countermeasures for Higher Order Cognition and Executive Function Impairment that Results from Disrupted Sleep Patterns, Presented at the NIDA-ODS Symposium entitled: Caffeine: Is the Next Problem Already Brewing, Rockville, MD *[Invited Lecture]*

2010 Oral Platform Presentation: Sleep deprivation selectively impairs emotional aspects of cognitive functioning, 27th Army Science Conference, Orlando, FL.

2010 Oral Platform Presentation: Exaggerated amygdala responses to masked fearful faces are specific to PTSD versus simple phobia, 27th Army Science Conference, Orlando, FL.

2011 Lecture Entitled: The effects of emotional intelligence on judgment and decision making, Military Operational Medicine Research Program Task Area C, R & A Briefing, Walter Reed Army Institute of Research, Silver Spring, MD *[Invited Lecture]*

2011 Lecture Entitled: Effects of bright light therapy on sleep, cognition, brain function, and neurochemistry following mild traumatic brain injury, Military Operational Medicine Research Program Task Area C, R & A Briefing, Walter Reed Army Institute of Research, Silver Spring, MD *[Invited Lecture]*

International

1999 Oral Platform Presentation: Functional MRI lateralization during memory encoding predicts seizure outcome following anterior temporal lobectomy, 27th Annual Meeting of

the International Neuropsychological Society, Boston, MA.

2001 Oral Platform Presentation: Sex differences in functional activation of the amygdala during the perception of happy faces, 29th Annual Meeting of the International Neuropsychological Society, Chicago, IL.

2002 Oral Platform Presentation: Developmental changes in the lateralized activation of the prefrontal cortex and amygdala during the processing of facial affect, 30th Annual Meeting of the International Neuropsychological Society, Toronto, Ontario, Canada.

2002 Oral Platform Presentation: Gray and white matter volume during adolescence correlates with cognitive performance: A morphometric MRI study, 30th Annual Meeting of the International Neuropsychological Society, Toronto, Ontario, Canada.

2007 Symposium on Cortical and Limbic Activation in Response to Visual Images of Low and High-Caloric Foods, 6th Annual Meeting of the International Society for Behavioral Nutrition and Physical Activity (ISBNPA), Oslo, Norway *[Invited Lecture]*

2008 Lecture on Sleep Deprivation, Executive Function, & Resilience to Sleep Loss, First Franco-American Workshop on War Traumatism, IMNSSA, Toulon, France *[Invited Lecture]*

Report of Clinical Activities and Innovations

Current Licensure and Certification

2001- Clinical Psychologist, New Hampshire

Practice Activities

1991-1995 Psychology, Clinical, Psychology Clinic, Texas Tech University, Lubbock, TX
Clinical Activity Description: Provided psychotherapy and other supervised psychological services for a broad spectrum of client problems. Duties included regular therapy contacts with four to eight clients per week for approximately four years. Clients ranged in age from preschool through middle age. Clinical responsibilities included intake evaluations, formal testing and assessment, case formulation and treatment plan development, and delivery of a wide range of psychotherapy services including crisis intervention, behavior modification, short-term cognitive restructuring, and long-term psychotherapy.
Patient Load: 6/week

1993-1995 Psychology, Neuropsychology, Methodist Hospital Rehabilitation Institute, Lubbock, TX
Clinical Activity Description: A two year placement consisting of two days per week within a large rehabilitation unit of a major regional medical center. Responsibilities included administration, scoring, and writing of neuropsychological assessments/reports, primarily emphasizing the Halstead-Reitan Neuropsychological Battery. Assessment services were provided on both inpatient and outpatient basis.

Patient Load: 2/week

1995-1996 Psychology, Neuropsychology, Yale University School of Medicine, Connecticut Mental Health Center
Clinical Activity Description: Neuropsychological and psychodiagnostic assessment of chronic and severe mentally ill patients. Duties included patient interviewing, test administration, scoring, interpretation, and report writing. Assessment and consultation services were provided for both the inpatient and outpatient units.
Patient Load: 2/week

1995-1996 Psychology, Clinical, Yale University School of Medicine, West Haven Mental Health Clinic
Clinical Activity Description: Provided short-term, long-term, and group psychotherapy services, consultation, and psychological assessments for adults, children, and families. Duties also included co-leading a regular outpatient group devoted to treatment of moderate to severe personality disorders.
Patient Load: 12/week

1996-1997 Psychology, Neuropsychology, University of Oklahoma Health Sciences Center
Clinical Activity Description: Full-time placement in the Neuropsychological Assessment Laboratory, which meets INS/Division 40 guidelines for post-doctoral training in clinical neuropsychology. Responsibilities included comprehensive neuropsychological assessment and consultation services, including test administration, scoring, interpretation, and report writing. Regular outpatient psychotherapy was also provided for approximately two patients per week.
Patient Load: 4/week

1997-1999 Psychology, Neuropsychology, University of Pennsylvania Medical Center
Clinical Activity Description: Full-time two-year placement in the Department of Neurology, which meets INS/Division 40 guidelines for post-doctoral training in clinical neuropsychology. Responsibilities included neuropsychological assessment, consultation, and psychotherapy services for the Departments of Neurology and Neurosurgery.
Patient Load: 3/week

Report of Education of Patients and Service to the Community

Recognition

2003-2007 Who's Who in America, Marquis Who's Who
2004-2005 Who's Who in Medicine and Healthcare, Marquis Who's Who

Report of Scholarship

Publications

Peer reviewed publications in print or other media

A) Research Investigations:

1. **Killgore WD**. The Affect Grid: a moderately valid, nonspecific measure of pleasure and arousal. Psychol Rep. 83(2):639-42, 1998.

2. **Killgore WD**. Empirically derived factor indices for the Beck Depression Inventory. Psychol Rep. 84(3 Pt 1):1005-13, 1999.

3. **Killgore WD**. Affective valence and arousal in self-rated depression and anxiety. Percept Mot Skills. 89(1):301-4, 1999.

4. **Killgore WD**, Adams RL. Prediction of Boston Naming Test performance from vocabulary scores: preliminary guidelines for interpretation. Percept Mot Skills. 89(1):327-37, 1999.

5. **Killgore WD**, Gangestad SW. Sex differences in asymmetrically perceiving the intensity of facial expressions. Percept Mot Skills. 89(1):311-4, 1999.

6. **Killgore WD**. The visual analogue mood scale: can a single-item scale accurately classify depressive mood state?. Psychol Rep. 85(3 Pt 2):1238-43, 1999.

7. **Killgore WD**, DellaPietra L, Casasanto DJ. Hemispheric laterality and self-rated personality traits. Percept Mot Skills. 89(3 Pt 1):994-6, 1999.

8. **Killgore WD**, Glosser G, Casasanto DJ, French JA, Alsop DC, Detre JA. Functional MRI and the Wada test provide complementary information for predicting post-operative seizure control. Seizure. 8(8):450-5, 1999.

9. **Killgore WD**. Evidence for a third factor on the Positive and Negative Affect Schedule in a college student sample. Percept Mot Skills. 90(1):147-52, 2000.

10. **Killgore WD**, Dellapietra L. Item response biases on the logical memory delayed recognition subtest of the Wechsler Memory Scale-III. Psychol Rep. 86(3 Pt 1):851-7, 2000.

11. **Killgore WD**, Casasanto DJ, Yurgelun-Todd DA, Maldjian JA, Detre JA. Functional activation of the left amygdala and hippocampus during associative encoding. Neuroreport. 11(10):2259-63, 2000.

12. Yurgelun-Todd DA, Gruber SA, Kanayama G, **Killgore WD**, Baird AA, Young AD. fMRI during affect discrimination in bipolar affective disorder. Bipolar Disord. 2(3 Pt 2):237-48, 2000.

13. **Killgore WD**. Sex differences in identifying the facial affect of normal and mirror-reversed faces. Percept Mot Skills. 91(2):525-30, 2000.

14. **Killgore WD**, DellaPietra L. Using the WMS-III to detect malingering: empirical validation of the rarely missed index (RMI). J Clin Exp Neuropsychol. 22(6):761-71, 2000.

15. Maldjian JA, Detre JA, **Killgore WD**, Judy K, Alsop D, Grossman M, Glosser G. Neuropsychologic performance after resection of an activation cluster involved in cognitive memory function. AJR Am J Roentgenol. 176(2):541-4, 2001.

16. **Killgore WD**, Oki M, Yurgelun-Todd DA. Sex-specific developmental changes in amygdala responses to affective faces. Neuroreport. 12(2):427-33, 2001.

17. **Killgore WD**, Yurgelun-Todd DA. Sex differences in amygdala activation during the perception of facial affect. Neuroreport. 12(11):2543-7, 2001.

18. Casasanto DJ, **Killgore WD**, Maldjian JA, Glosser G, Alsop DC, Cooke AM, Grossman M, Detre JA. Neural correlates of successful and unsuccessful verbal memory encoding. Brain Lang. 80(3):287-95, 2002.

19. **Killgore WD**. Laterality of lesions and trait-anxiety on working memory performance. Percept Mot Skills. 94(2):551-8, 2002.

20. **Killgore WD**, Cupp DW. Mood and sex of participant in perception of happy faces. Percept Mot Skills. 95(1):279-88, 2002.

21. Yurgelun-Todd DA, **Killgore WD**, Young AD. Sex differences in cerebral tissue volume and cognitive performance during adolescence. Psychol Rep. 91(3 Pt 1):743-57, 2002.

22. Yurgelun-Todd DA, **Killgore WD**, Cintron CB. Cognitive correlates of medial temporal lobe development across adolescence: a magnetic resonance imaging study. Percept Mot Skills. 96(1):3-17, 2003.

23. **Killgore WD**, Young AD, Femia LA, Bogorodzki P, Rogowska J, Yurgelun-Todd DA. Cortical and limbic activation during viewing of high- versus low-calorie foods. Neuroimage. 19(4):1381-94, 2003.

24. **Killgore WD**, Yurgelun-Todd DA. Activation of the amygdala and anterior cingulate during nonconscious processing of sad versus happy faces. Neuroimage. 21(4):1215-23, 2004.

25. **Killgore WD**, Yurgelun-Todd DA. Sex-related developmental differences in the lateralized activation of the prefrontal cortex and amygdala during perception of facial affect. Percept Mot Skills. 99(2):371-91, 2004.

26. **Killgore WD**, Glahn DC, Casasanto DJ. Development and Validation of the Design Organization Test (DOT): a rapid screening instrument for assessing visuospatial ability. J Clin Exp Neuropsychol. 27(4):449-59, 2005.

27. **Killgore WD**, Yurgelun-Todd DA. Body mass predicts orbitofrontal activity during visual presentations of high-calorie foods. Neuroreport. 16(8):859-63, 2005.

28. Wesensten NJ, **Killgore WD**, Balkin TJ. Performance and alertness effects of caffeine, dextroamphetamine, and modafinil during sleep deprivation. J Sleep Res. 14(3):255-66, 2005.

29. **Killgore WD**, Yurgelun-Todd DA. Social anxiety predicts amygdala activation in adolescents viewing fearful faces. Neuroreport. 16(15):1671-5, 2005.

30. **Killgore WD**, Yurgelun-Todd DA. Developmental changes in the functional brain responses of adolescents to images of high and low-calorie foods. Dev Psychobiol. 47(4):377-97, 2005.

31. Kahn-Greene ET, Lipizzi EL, Conrad AK, Kamimori GH, **Killgore WD**. Sleep deprivation adversely affects interpersonal responses to frustration. Pers Individ Dif. 41(8):1433-1443, 2006.

32. McBride SA, Balkin TJ, Kamimori GH, **Killgore WD**. Olfactory decrements as a function of two nights of sleep deprivation. J Sens Stud. 24(4):456-63, 2006.

33. **Killgore WD**, Yurgelun-Todd DA. Ventromedial prefrontal activity correlates with depressed mood in adolescent children. Neuroreport. 17(2):167-71, 2006.

34. **Killgore WD**, Vo AH, Castro CA, Hoge CW. Assessing risk propensity in American soldiers: preliminary reliability and validity of the Evaluation of Risks (EVAR) scale--English version. Mil Med. 171(3):233-9, 2006.

35. **Killgore WD**, Balkin TJ, Wesensten NJ. Impaired decision making following 49 h of sleep deprivation. J Sleep Res. 15(1):7-13, 2006.

36. **Killgore WD**, Stetz MC, Castro CA, Hoge CW. The effects of prior combat experience on the expression of somatic and affective symptoms in deploying soldiers. J Psychosom Res. 60(4):379-85, 2006.

37. **Killgore WD**, McBride SA, Killgore DB, Balkin TJ. The effects of caffeine, dextroamphetamine, and modafinil on humor appreciation during sleep deprivation. Sleep. 29(6):841-7, 2006.

38. **Killgore WD**, McBride SA. Odor identification accuracy declines following 24 h of sleep deprivation. J Sleep Res. 15(2):111-6, 2006.

39. **Killgore WD**, Yurgelun-Todd DA. Affect modulates appetite-related brain activity to images of food. Int J Eat Disord. 39(5):357-63, 2006.

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B) Other Peer Reviewed Publications

88. **Killgore WD**. Academic and research interest in several approaches to psychotherapy: a computerized search of literature in the past 16 years. Psychol Rep. 87(3 Pt 1):717-20, 2000.

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Reviews/Chapters/Editorials

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3. **Killgore, WD.** Caffeine and other alerting agents. In Thorpy, M. & Billiard, M. (Eds), Sleepiness: Causes, Consequences, Disorders and Treatment. Cambridge University Press, UK, 2011, pp. 430-443.

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5. **Killgore WD.** Priorities and challenges for caffeine research: Energy drinks, PTSD, and withdrawal reversal. The Experts Speak Column, Journal of Caffeine Research, 1, 11-12, 2011.

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1. **Killgore, WD,** & Bailey, JD. Sleep History And Readiness Predictor (SHARP). Silver Spring, MD: Walter Reed Army Institute of Research; 2006. Computer program for predicting cognitive status based on actigraphically recorded sleep history. Patent Pending.

Thesis

1. **Killgore, WD.** Senior Honors Thesis: Perceived intensity of lateral facial asymmetry of spontaneous vs. posed emotional expressions. Albuquerque, NM: University of New Mexico;1990. **(Outstanding Psychology Senior Honors Thesis, UNM-1990).*

2. **Killgore, WD.** Masters Thesis: Interaction of visual field and lateral facial asymmetry on the perceived intensity of emotional expressions in depressed and non-depressed subjects. Lubbock, TX: Texas Tech University;1992.

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1. Estrada, A, **Killgore, WD,** Rouse, T, Balkin, TJ, & Wildzunas, RM. Total sleep time measured by actigraphy predicts academic performance during military training [abstract]. Abstract presented at the 22nd Meeting of the Associated Professional Sleep Societies, Baltimore, MD, June 7-12, 2008. SLEEP, 31 (Supplement), A134.

2. **Killgore, WD,** Lipizzi, EL, Smith, KL, Killgore, DB, Rupp, TL, Kamimori, GH, & Balkin, T. J. Nonverbal intelligence is inversely related to the ability to resist sleep loss [abstract]. Abstract presented at the 22nd Meeting of the Associated Professional Sleep Societies, Baltimore, MD, June 7-12, 2008. SLEEP, 31 (Supplement), A134.

3. **Killgore, WD,** Lipizzi, EL, Killgore, DB, Rupp, TL, Kamimori, GH, & Balkin, TJ. Emotional intelligence predicts declines in emotion-based decision-making following sleep deprivation [abstract]. Abstract presented at the 22nd Meeting of the Associated Professional Sleep Societies, Baltimore, MD, June 7-12, 2008. SLEEP, 31 (Supplement), A134.

4. Reid, CT, Smith, K, **Killgore, WD,** Rupp, TL, & Balkin, TJ. Higher intelligence is associated with less subjective sleepiness during sleep restriction [abstract]. Abstract presented at the 22nd Meeting of the Associated Professional Sleep Societies, Baltimore, MD, June 7-12, 2008. SLEEP, 31 (Supplement), A375.

5. Newman, R, **Killgore, WD,** Rupp, T. L, & Balkin, TJ. Better baseline olfactory discrimination is associated with worse PVT and MWT performance with sleep restriction and recovery [abstract]. Abstract presented at the 22nd Meeting of the Associated Professional Sleep Societies, Baltimore, MD, June 7-12, 2008. SLEEP, 31 (Supplement), A375.

6. Smith, KL, Reid, CT, **Killgore, WD,** Rupp, TL, & Balkin, TJ. Personality factors associated with performance and sleepiness during sleep restriction and recovery [abstract]. Abstract presented at the 22nd Meeting of the Associated Professional Sleep Societies, Baltimore, MD, June 7-12, 2008. SLEEP, 31 (Supplement), A376.

7. Lipizzi, EL, **Killgore, WD,** Rupp, TL, & Balkin, TJ. Risk-taking behavior is elevated during recovery from sleep restriction [abstract]. Abstract presented at the 22nd Meeting of the Associated Professional Sleep Societies, Baltimore, MD, June 7-12, 2008. SLEEP, 31 (Supplement), A376.

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9. **Killgore, WD,** Estrada, A, Balkin, TJ, & Wildzunas, RM. Sleep duration during army training predicts course performance [abstract]. Poster presented at the 6th Annual Force Health Protection Conference, Albuquerque, NM, August, 11-17, 2008.

10. **Killgore, WD,** Lipizzi, EL, Smith, KL, Killgore, DB, Rupp, TL, Kamimori, GH, & Balkin, TJ. Higher cognitive ability is associated with reduced relative resistance to sleep loss

[abstract]. Poster presented at the 6th Annual Force Health Protection Conference, Albuquerque, NM, August, 11-17, 2008.

11. **Killgore, WD,** Rupp, TL, Grugle, NL, Lipizzi, EL, & Balkin, TJ. Maintaining alertness during sustained operations: Which stimulant is most effective after 44 hours without sleep [abstract]? Poster presented at the 6th Annual Force Health Protection Conference, Albuquerque, NM, August, 11-17, 2008.

12. **Killgore, WD,** Newman, RA, Lipizzi, EL, Kamimori, GH, & Balkin, TJ. Sleep deprivation increases feelings of anger but reduces verbal and physical aggression in Soldiers [abstract]. Poster presented at the 6th Annual Force Health Protection Conference, Albuquerque, NM, August, 11-17, 2008.
13. Kelley, AM, Dretsch, M, **Killgore, WD,** & Athy, JR. Risky behaviors and attitudes about risk in Soldiers. Abstract presented at the 29th Annual Meeting of the Society for Judgment and Decision Making, Chicago, IL, November, 2008.

14. **Killgore, WD,** Ross, AJ, Silveri, MM, Gruber, SA, Kamiya, T, Kawada, Y, Renshaw, PF, & Yurgelun-Todd, DA. Citicoline affects appetite and cortico-limbic responses to images of high calorie foods. Abstract presented at the Society for Neuroscience, Washington DC, November 19, 2008.

15. Britton, JC, Stewart, SE, Price, LM, **Killgore, WD,** Gold, AL, Jenike, MA, & Rauch, SL. Reduced amygdalar activation in response to emotional faces in pediatric Obsessive-Compulsive Disorder. Abstract presented at the Annual meeting of the American College of Neuropsychopharmacology, Scottsdale, AZ, December 7-11, 2008.

16. **Killgore, WD,** Balkin, TJ, Estrada, A, & Wildzunas, RM. Sleep and performance measures in soldiers undergoing military relevant training. Abstract presented at the 26th Army Science Conference, Orlando, FL, December 1-4, 2008.

17. **Killgore, WD** & Yurgelun-Todd, DA. Cerebral correlates of amygdala responses during non-conscious perception of affective faces in adolescent children. Abstract presented at the 37th Annual Meeting of the International Neuropsychological Society, Atlanta, GA, February 11-14, 2009.

18. **Killgore, WD,** Killgore, DB, Grugle, NL, & Balkin, TJ. Odor identification ability predicts executive function deficits following sleep deprivation. Abstract presented the 37th Annual Meeting of the International Neuropsychological Society, Atlanta, GA, February 11-14, 2009.

19. **Killgore, WD,** Rupp, TL, Killgore, DB, Grugle, NL, and Balkin, TJ. Differential effects of stimulant medications on verbal and nonverbal fluency during sleep deprivation. Abstract presented the 37th Annual Meeting of the International Neuropsychological Society, Atlanta, GA, February 11-14, 2009.

20. **Killgore, WD,** Killgore, DB, Kamimori, GH, & Balkin, TJ. When being smart is a liability: More intelligent individuals may be less resistant to sleep deprivation. Abstract presented the 37th Annual Meeting of the International Neuropsychological Society, Atlanta, GA, February 11-14, 2009.

21. **Killgore, WD,** Britton, JC, Price, LM, Gold, AL, Deckersbach, T, & Rauch, SL. Introversion is associated with greater amygdala and insula activation during viewing of masked affective stimuli. Abstract presented the 37th Annual Meeting of the International Neuropsychological Society, Atlanta, GA, February 11-14, 2009.

22. **Killgore, WD,** Britton, JC, Price, LM, Gold, AL, Deckersbach, T, & Rauch, SL. Amygdala responses of specific animal phobics do not differ from healthy controls during masked fearful face perception. Abstract presented the 37th Annual Meeting of the International Neuropsychological Society, Atlanta, GA, February 11-14, 2009.

23. **Killgore, WD,** Britton, JC, Price, LM, Gold, AL, Deckersbach, T, & Rauch, SL. Small animal phobics show sustained amygdala activation in response to masked happy facial expressions. Abstract presented the 37th Annual Meeting of the International Neuropsychological Society, Atlanta, GA, February 11-14, 2009. ***[*Merit Poster Award]***

24. Price, LM, **Killgore, WD,** Britton, JC, Kaufman, ML, Gold, AL, Deckersbach, T, & Rauch, SL. Anxiety sensitivity correlates with insula activation in response to masked fearful faces in specific animal phobics and healthy subjects. Abstract presented at the Annual Conference of the Anxiety Disorders Association of America, Santa Ana Pueblo, New Mexico, March 12-15, 2009.

25. **Killgore, WD,** Britton, JC, Price, LM, Gold, AL, Deckersbach, T, & Rauch, SL. Neuroticism is inversely correlated with amygdala and insula activation during masked presentations of affective stimuli. Abstract presented at the Annual Conference of the Anxiety Disorders Association of America, Santa Ana Pueblo, New Mexico, March 12-15, 2009.

26. **Killgore, WD,** Kelley, AM, & Balkin, TJ. Development and validation of a scale to measure the perception of invincibility. Abstract presented at the Annual Conference of the Anxiety Disorders Association of America, Santa Ana Pueblo, New Mexico, March 12-15, 2009.

27. Kelly, AM, **Killgore WD,** Athy, J, & Dretsch, M. Risk propensity, risk perception, risk aversion, and sensation seeking in U.S. Army soldiers. Abstract presented at the 80th Annual Scientific Meeting of the Aerospace Medical Association, Los Angeles, CA, May 3-7, 2009.

28. Britton, JC, Stewart, SE, Price, LM, **Killgore, WD,** Jenike, MA, & Rauch, SL. The neural correlates of negative priming in pediatric obsessive-compulsive disorder (OCD). Abstract presented at the 64th Annual Scientific Meeting of the Society of Biological Psychiatry, Vancouver, Canada, May 14-16, 2009.

29. **Killgore, WD,** Killgore, DB, Kamimori, GH, & Balkin, TJ. Caffeine protects against increased risk-taking behavior during severe sleep deprivation. Abstract presented at the 23rd Annual Meeting of the Associated Professional Sleep Societies, Seattle, Washington, June 7-12, 2009.

30. Killgore, DB, **Killgore, WD,** Grugle, NL, & Balkin, TJ. Executive functions predict the ability to sustain psychomotor vigilance during sleep loss. Abstract presented at the 23rd Annual Meeting of the Associated Professional Sleep Societies, Seattle, Washington, June 7-

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31. **Killgore, WD,** & Yurgelun-Todd, DA. Trouble falling asleep is associated with reduced activation of dorsolateral prefrontal cortex during a simple attention task. Abstract presented at the 23rd Annual Meeting of the Associated Professional Sleep Societies, Seattle, Washington, June 7-12, 2009.

32. **Killgore, WD,** Kelley, AM, & Balkin, TJ. A new scale for measuring the perception of invincibility. Abstract presented at the 12th Annual Force Health Protection Conference, Albuquerque, New Mexico, August 14-21, 2009.

33. **Killgore, WD,** Killgore, DB, Grugle, NL, & Balkin, TJ. Executive functions contribute to the ability to resist sleep loss. Abstract presented at the 12th Annual Force Health Protection Conference, Albuquerque, New Mexico, August 14-21, 2009.

34. **Killgore, WD,** Killgore, DB, Kamimori, GH, & Balkin, TJ. Caffeine reduces risk-taking behavior during severe sleep deprivation. Abstract presented at the 12th Annual Force Health Protection Conference, Albuquerque, New Mexico, August 14-21, 2009. ***[*Best Paper Award: Research]***

35. **Killgore, WD,** Castro, CA, & Hoge, CW. Normative data for the Evaluation of Risks Scale—Bubble Sheet Version (EVAR-B) for large scale surveys of returning combat veterans. Abstract presented at the 12th Annual Force Health Protection Conference, Albuquerque, New Mexico, August 14-21, 2009.

36. **Killgore, WD,** Castro, CA, & Hoge, CW. Combat exposure and post-deployment risky behavior. Abstract presented at the 12th Annual Force Health Protection Conference, Albuquerque, New Mexico, August 14-21, 2009.

37. **Killgore, WD**, Price, LM, Britton, JC, Simon, N, Pollack, MH, Weiner, MR, Schwab, ZJ, Rosso, IM, & Rauch, SL. Paralimbic responses to masked emotional faces in PTSD: Disorder and valence specificity. Abstract presented at the Annual McLean Hospital Research Day, January 29, 2010.

38. **Killgore, WD**, Killgore, DB, Kamimori, GH, & Balkin, TJ. Caffeine minimizes behavioral risk-taking during 75 hours of sleep deprivation. Abstract presented at the 38th Annual Meeting of the International Neuropsychological Society, Acapulco, Mexico, February 3-6, 2010.

39. **Killgore, WD** & Balkin, TJ. Vulnerability to sleep loss is affected by baseline executive function capacity. Abstract presented at the 38th Annual Meeting of the International Neuropsychological Society, Acapulco, Mexico, February 3-6, 2010.

40. **Killgore, WD**, Smith, KL, Reichardt, RM., Killgore, DB, & Balkin, TJ. Intellectual capacity is related to REM sleep following sleep deprivation. Abstract presented at the 38th Annual Meeting of the International Neuropsychological Society, Acapulco, Mexico, February 3-6, 2010.

41. **Killgore, WD** & Yurgelun-Todd, DA. Cerebral correlates of amygdala responses to masked fear, anger, and happiness in adolescent and pre-adolescent children. Abstract presented at the 38th Annual Meeting of the International Neuropsychological Society, Acapulco, Mexico, February 3-6, 2010.

42. **Killgore, WD**, Post, A, & Yurgelun-Todd, DA. Sex differences in cortico-limbic responses to images of high calorie food. Abstract presented at the 38th Annual Meeting of the International Neuropsychological Society, Acapulco, Mexico, February 3-6, 2010.

43. **Killgore, WD** & Yurgelun-Todd, DA. Self-reported insomnia is associated with increased activation within the default-mode network during a simple attention task. Abstract presented at the 38th Annual Meeting of the International Neuropsychological Society, Acapulco, Mexico, February 3-6, 2010.

44. **Killgore, WD**, Price, LM, Britton, JC, Gold, AL, Deckersbach, T, & Rauch, SL. Neural correlates of anxiety sensitivity factors during presentation of masked fearful faces. Abstract presented at the 38th Annual Meeting of the International Neuropsychological Society, Acapulco, Mexico, February 3-6, 2010.

45. **Killgore, WD**, Grugle, NL, Conrad, TA, & Balkin, TJ. Baseline executive function abilities predict risky behavior following sleep deprivation. Abstract presented at the 24th Annual Meeting of the Associated Professional Sleep Societies, San Antonio, Texas, June 5-9, 2010.

46. **Killgore, WD**, Grugle, NL, & Balkin, TJ. Judgment of objective vigilance performance is affected by sleep deprivation and stimulants. Abstract presented at the 24th Annual Meeting of the Associated Professional Sleep Societies, San Antonio, Texas, June 5-9, 2010.

47. Killgore, DB, **Killgore, WD**, Grugle, NL, & Balkin, TJ. Resistance to sleep loss and its relationship to decision making during sleep deprivation. Abstract presented at the 24th Annual Meeting of the Associated Professional Sleep Societies, San Antonio, Texas, June 5-9, 2010.

48. Killgore DB, **Killgore, WD**, Grugle, NL, & Balkin, TJ. Subjective sleepiness and objective performance: Differential effects of stimulants during sleep deprivation. Abstract presented at the 24th Annual Meeting of the Associated Professional Sleep Societies, San Antonio, Texas, June 5-9, 2010.

49. Rupp, TL, **Killgore, WD**, & Balkin, TJ. Vulnerability to sleep deprivation is differentially mediated by social exposure in extraverts vs. introverts. Oral presentation at the "Data Blitz" section at the 24th Annual Meeting of the Associated Professional Sleep Societies, San Antonio, Texas, June 5-9, 2010.

50. Rupp, TL, **Killgore, WD**, & Balkin, TJ. Extraverts may be more vulnerable than introverts to sleep deprivation on some measures of risk-taking and executive functioning. Abstract presented at the 24th Annual Meeting of the Associated Professional Sleep Societies, San Antonio, Texas, June 5-9, 2010.

51. Rupp, TL, **Killgore, WD**, & Balkin, TJ. Vulnerability to sleep deprivation is differentially

mediated by social exposure in extraverts vs. introverts. Abstract presented at the 24th Annual Meeting of the Associated Professional Sleep Societies, San Antonio, Texas, June 5-9, 2010.

52. Capaldi, VF, Guerrero, ML, & **Killgore, WD**. Sleep disorders among OIF and OEF Soldiers. Abstract presented at the 24th Annual Meeting of the Associated Professional Sleep Societies, San Antonio, Texas, June 5-9, 2010.

53. **Killgore, WD**, Killgore, DB, Kamimori, GH, & Balkin, TJ. Caffeine reduces behavioral risk-taking during sleep deprivation. Abstract presented at the 65th Annual Meeting of the Society for Biological Psychiatry, New Orleans, Louisiana, May 20-22, 2010.

54. **Killgore, WD**, Price, LM, Britton, JC, Simon, N, Pollack, MH, Weiner, MR, Schwab, ZJ, Rosso, IM, & Rauch, SL. Paralimbic responses to masked emotional faces in PTSD: Disorder and valence specificity. Abstract presented at the 65th Annual Meeting of the Society for Biological Psychiatry, New Orleans, Louisiana, May 20-22, 2010.

55. Rosso, IM, Makris, N, Britton, JC, Price, LM, Gold, AL, Deckersbach, T, **Killgore, WD**, & Rauch SL. Anxiety sensitivity correlates with insular cortex volume and thickness in specific animal phobia. Abstract presented at the 65th Annual Meeting of the Society for Biological Psychiatry, New Orleans, Louisiana, May 20-22, 2010.

56. Rupp, TL, **Killgore, WD**, & Balkin, TJ. Vulnerability to sleep deprivation is mediated by social exposure in extraverts versus introverts. Oral platform presentation at the 20th Congress of the European Sleep Research Society, Lisbon, Portugal, September 14-18, 2010.

57. **Killgore, WD**, Estrada, A, & Balkin, TJ. A tool for monitoring soldier fatigue and predicting cognitive readiness: The Sleep History and Readiness Predictor (SHARP). Abstract presented at the 27th Army Science Conference, Orlando, FL, November 29-December 2, 2010.

58. **Killgore, WD**, Kamimori, GH, & Balkin, TJ. Caffeinated gum minimizes risk-taking in soldiers during prolonged sleep deprivation. Abstract presented at the 27th Army Science Conference, Orlando, FL, November 29-December 2, 2010.

59. **Killgore, WD**, Britton, JC, Schwab, ZJ, Weiner, MR, Rosso, IM, & Rauch, SL. Exaggerated amygdala responses to masked fearful faces are specific to PTSD versus simple phobia. Oral platform presentation at the 27th Army Science Conference, Orlando, FL, November 29-December 2, 2010. ***[*Winner Best Paper in Neuroscience]***

60. **Killgore, WD**, Kamimori, GH, & Balkin, TJ. Sleep deprivation selectively impairs emotional aspects of cognitive functioning. Oral platform presentation at the 27th Army Science Conference, Orlando, FL, November 29-December 2, 2010.

61. Rupp, TL, **Killgore, WD**, & Balkin, TJ. Evaluation of personality and social exposure as individual difference factors influencing response to sleep deprivation. Oral platform presentation at the 27th Army Science Conference, Orlando, FL, November 29-December 2, 2010.

62. **Killgore, WD**, Britton, JC, Rosso, IM, Schwab, ZJ, Weiner, MR, & Rauch, SL. Shared and differential patterns of amygdalo-cortical activation across anxiety disorders. Abstract presented at the 49th Annual Meeting of the American College of Neuropsychopharmacology, Miami Beach, FL, December 5-9, 2010.

63. Rosso, IM, **Killgore, WD**, Britton, JC, Weiner, MR, Schwab, ZJ, & Rauch, SL. Neural correlates of PTSD symptom dimensions during emotional processing: A functional magnetic resonance imaging study. Abstract presented at the 49th Annual Meeting of the American College of Neuropsychopharmacology, Miami Beach, FL, December 5-9, 2010.

64. **Killgore, WD,** Rosso, IM, Britton, JC, Zchwab, ZJ, Weiner, MR, & Rauch, SL. Cortico-limbic activation differentiates among anxiety disorders with and without a generalized threat response. Abstract presented at the McLean Hospital Research Day, January 13, 2011.

65. Weiner, MR, Schwab, ZJ, Rauch, SL, & **Killgore WD**. Personality factors predict brain responses to images of high-calorie foods. Abstract presented at the McLean Hospital Research Day, January 13, 2011.

66. Schwab, ZJ, Weiner, MR, Rauch, SL, & **Killgore, WD.** Emotional and cognitive intelligence: Support for the neural efficiency hypothesis. Abstract presented at the McLean Hospital Research Day, January 13, 2011.

67. Crowley, DJ, Covell, MJ, **Killgore, WD**, Schwab, ZJ, Weiner, MR, Acharya, D, Rosso, IM, & Silveri, MM. Differential influence of facial expression on inhibitory capacity in adolescents versus adults. Abstract presented at the McLean Hospital Research Day, January 13, 2011.

68. **Killgore, WD**, Britton, JC, Rosso, IM, Schwab, ZJ, Weiner, MR, & Rauch, SL. Similarities and differences in cortico-limbic responses to masked affect probes across anxiety disorders. Abstract presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

69. Rosso, IM, **Killgore, WD**, Britton, JC, Weiner, MR, Schwab, ZJ, & Rauch, SL. Hyperarousal and reexperiencing symptoms of post-traumatic stress disorder are differentially associated with limbic-prefrontal brain responses to threatening stimuli. Abstract presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

70. Schwab, ZJ, Weiner, MR, Rauch, SL, & **Killgore, WD**. Neural correlates of cognitive and emotional intelligence in adults. Abstract presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

71. Schwab, ZJ, Weiner, MR, Rauch, SL, & **Killgore, WD**. Cognitive and emotional intelligences: Are they distinct or related constructs? Abstract presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

72. Schwab, ZJ, Weiner, MR, Rauch, SL, & **Killgore, WD**. Discrepancy scores between cognitive and emotional intelligence predict neural responses to affective stimuli. Abstract

presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

73. **Killgore, WD**, Schwab, ZJ, Weiner, MR, & Rauch, SL. Smart people go with their gut: Emotional intelligence correlates with non-conscious insular responses to facial trustworthiness. Abstract presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

74. **Killgore, WD**, Weiner, MR, Schwab, ZJ, & Rauch, SL. Whom can you trust? Neural correlates of subliminal perception of facial trustworthiness. Abstract presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

75. Weiner, MR, Schwab, ZJ, & Rauch, SL, **Killgore, WD**. Impulsiveness predicts responses of brain reward circuitry to high-calorie foods. Abstract presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

76. Weiner, MR, Schwab, ZJ, & Rauch, SL, **Killgore, WD**. Conscientiousness predicts brain responses to images of high-calorie foods. Abstract presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

77. Crowley, DJ, Covell, MJ, **Killgore, WD**, Schwab, ZJ, Weiner, MR, Acharya, D, Rosso, IM, & Silveri, MM. Differential influence of facial expression on inhibitory capacity in adolescents versus adults. Abstract presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

78. Gruber, SA, Dahlgren, MK, **Killgore, WD**, Sagar, KA, & Racine, MT. Marijuana: Age of onset of use impacts executive function and brain activation. Abstract presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

79. **Killgore, WD,** Conrad, TA, Grugle, NL, & Balkin, TJ. Baseline executive function abilities correlate with risky behavior following sleep deprivation. Abstract presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

80. **Killgore, WD,** Grugle, NL, Killgore, DB, & Balkin, TJ. Resistance to sleep loss and decision making during sleep deprivation. Abstract presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February 2-5, 2011.

81. **Killgore, WD,** Rosso, IM, Britton, JC, Zchwab, ZJ, Weiner, MR, & Rauch, SL. Cortico-limbic activation differentiates among anxiety disorders with and without a generalized threat response. Abstract presented at the 66th Annual Meeting of the Society for Biological Psychiatry, San Francisco, CA, May 12-14, 2011.

82. Schwab, ZJ, Weiner, MR, Rauch, SL, & **Killgore, WD.** Emotional and cognitive intelligence: Support for the neural efficiency hypothesis. Abstract presented at the 66th Annual Meeting of the Society for Biological Psychiatry, San Francisco, CA, May 12-14,

2011.

83. Weiner, MR, Schwab, ZJ, Rauch, SL, & **Killgore WD**. Personality factors predict brain responses to images of high-calorie foods. Abstract presented at the 66th Annual Meeting of the Society for Biological Psychiatry, San Francisco, CA, May 12-14, 2011.

84. **Killgore, WD,** Grugle, NL, & Balkin, TJ. Sleep deprivation impairs recognition of specific emotions. Abstract presented at the 25th Annual Meeting of the Associated Professional Sleep Societies, Minneapolis, MN, June 11-15, 2011.

85. **Killgore, WD,** & Balkin, TJ. Does vulnerability to sleep deprivation influence the effectiveness of stimulants on psychomotor vigilance? Abstract presented at the 25th Annual Meeting of the Associated Professional Sleep Societies, Minneapolis, MN, June 11-15, 2011.

86. Killgore, DB, **Killgore, WD,** Grugle, NJ, & Balkin, TJ. Sleep deprivation impairs recognition of specific emotions. Abstract presented at the 25th Annual Meeting of the Associated Professional Sleep Societies, Minneapolis, MN, June 11-15, 2011.

87. Weiner, MR, Schwab, ZJ, & **Killgore, WD.** Daytime sleepiness is associated with altered brain activation during visual perception of high-calorie foods: An fMRI study. Abstract presented at the 25th Annual Meeting of the Associated Professional Sleep Societies, Minneapolis, MN, June 11-15, 2011.

88. Schwab, ZJ, Weiner, MR, & **Killgore, WD.** Functional MRI correlates of morningness-eveningness during visual presentation of high calorie foods. Abstract presented at the 25th Annual Meeting of the Associated Professional Sleep Societies, Minneapolis, MN, June 11-15, 2011.

89. Song, CH, Kizielewicz, J, Schwab, ZJ, Weiner, MR, Rauch, SL, & **Killgore, WD**. Time is of the essence: The Design Organization Test as a valid, reliable, and brief measure of visuospatial ability. Abstract submitted for presentation at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA, February 15-18, 2012.

90. Kipman, M, Schwab, ZJ, DelDonno, S, & **Killgore, WD**. Gender differences in the contribution of cognitive and emotional intelligence to the left visual field bias for facial perception. Abstract submitted for presentation at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA, February 15-18, 2012.

91. Kipman, M., Schwab, ZJ, Weiner, MR, DelDonno, S, Rauch, SL, & **Killgore, WD**. Contributions of emotional versus cognitive intelligence in humor appreciation. Abstract submitted for presentation at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA, February 15-18, 2012.

92. Schwab, ZJ, & **Killgore, WD**. Disentangling emotional and cognitive intelligence. Abstract submitted for presentation at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA, February 15-18, 2012.

93. Schwab, ZJ, & **Killgore, WD**. Sex differences in functional brain responses to food. Abstract submitted for presentation at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA, February 15-18, 2012.

94. DelDonno, S, Schwab, ZJ, Kipman, M, Rauch, SL, & **Killgore, WD**. The influence of cognitive and emotional intelligence on performance on the Iowa Gambling Task. Abstract submitted for presentation at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA, February 15-18, 2012.

95. **Killgore, WD**, Britton, JC., Rosso, IM, Schwab, ZJ, Weiner, MR, & Rauch, SL. Shared and unique patterns of cortico-limbic activation across anxiety disorders. Abstract submitted for presentation at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA, February 15-18, 2012.

96. **Killgore, WD**, & Balkin, TJ. Sleep deprivation degrades recognition of specific emotions. Abstract submitted for presentation at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA, February 15-18, 2012.

97. **Killgore, WD**, & Schwab, ZJ. Emotional intelligence correlates with somatic marker circuitry responses to subliminal cues of facial trustworthiness. Abstract submitted for presentation at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA, February 15-18, 2012.

98. **Killgore, WD**, & Schwab, ZJ. Trust me! Neural correlates of the ability to identify facial trustworthiness. Abstract submitted for presentation at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA, February 15-18, 2012.

99. **Killgore, WD**, Schwab, ZJ, Weiner, MR, Kipman, M, DelDonno, S, & Rauch SL. Overeating is associated with altered cortico-limbic responses to images of high calorie foods. Abstract submitted for presentation at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA, February 15-18, 2012.

100. **Killgore, WD**, Weiner, MR, & Schwab, ZJ. Daytime sleepiness affects prefrontal regulation of food intake. Abstract submitted for presentation at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA, February 15-18, 2012.

101. **Killgore, WD**. Overlapping and distinct patterns of neurocircuitry across PTSD, Panic Disorder, and Simple Phobia. Abstract submitted for presentation at the 32nd Annual Conference of the Anxiety Disorders Association of America, Arlington, VA, April 12-15, 2012.

Narrative Report **(limit to 500 words)**

My research has emphasized the study of higher order cognition and executive functions and how these cognitive abilities are influenced and guided by subtle affective processes. My early work focused on the perception, experience, and expression of normal and pathological affect, including perceptual asymmetries that occur during visual perception of emotional faces and the clues that these asymmetries provide about the neurobiological substrates of affective processing. In the mid to late 1990s, this work

focused primarily on the interaction between mood-induced shifts in hemispheric arousal and sex differences in cerebral laterality. These processes were investigated at several levels, ranging from visual-hemifield biases to functional neuroimaging studies of subcortical structures involved in memory and emotion. Over the past 8 years, my research has utilized functional and structural magnetic resonance imaging to study the interaction of affective processes and cognition within limbic networks of the medial temporal lobes and prefrontal cortex. This line of research has led to the refinement of a developmental model of prefrontal cortical-limbic maturation that explains how these processes contribute to the way adolescents perceive emotionally and motivationally relevant stimuli such as affective faces and visual images of food. As a result of the Iraq War, I took an extended leave of absence to serve in the Active Duty Army as the Chief of the Neurocognitive Performance Branch at the Walter Reed Army Institute of Research from 2002-2007. During that time, I extended the scope of my affective processing research to also examine the effects of stressors such as prolonged sleep deprivation, chronic sleep restriction, nutritional deprivation, and the use of stimulant countermeasures on the cognitive-affective systems within the brain. This line of investigation suggests that sleep deprivation alters the metabolic activity within the medial prefrontal cortex, resulting in subtle but profound effects on specific aspects of cognition. These sleep-loss related prefrontal decrements impair the ability to use affective processes to guide judgment and decision-making, particularly in high-risk or morally relevant situations. My recent investigations also suggest that while commonly used stimulants such as caffeine, modafinil, and dextroamphetamine are highly effective at reversing sleep-loss induced deficits in alertness and vigilance, they have virtually no restorative effect on the cognitive-affective decision-making systems of the brain. Having left military service to return to McLean Hospital full time in the summer of 2007, I am now focusing on extending my previous work to identify the extent to which these cognitive-affective decision-making systems and their neurobiological substrates are impaired or altered in patients suffering from affective psychosis and post-traumatic stress.

My recent teaching activities have primarily involved daily supervision and training of student research assistants and occasional seminar presentations. Over the past 5 years, I have closely and regularly mentored more than 25 students at the undergraduate, graduate, and post-doctoral level. This involvement has included one-on-one supervision and training in basic research methods, neuropsychological assessment, statistical analysis, and manuscript preparation. Nearly all of my advisees have served as co-authors on abstracts, posters, talks, and published manuscripts based on my research program.